THE JOURNAL

OF THE

SOUTH CAROLINA MEDICAL ASSOCIATION.

4 Vanderhorst Street, Charleston, S. C.

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ANNUAL SUBSCRIPTION, $2.00.

THE JOURNAL is published monthly under the auspices of the South Carolina Medical Association. Members who do not receive their copies will please notify the Managing Editor at once. Secretaries of county societies are requested to send reports of their meetings, and items of news that may be of interest to the profession. Original articles are solicited. Articles should be type-written; and illustrations sent with articles will be printed at the expense of the writer. Reprints will be furnished at the rate of 75c. a page for a hundred copies.

All matter must be in the hands of the editor by the 10th of each month.

EDITORIAL COMMENT.

SIDE ISSUES.

There is no profession whose pursuit is so filled with exacting duties and corroding anxieties as that of medicine. Physicians, therefore, by reason of the great sacrifices of body and mind which their calling entails, need refreshment and recreation even more urgently than worn doctor some kind of diversion is other men. To the body-weary and care- essential to the just fulfilment of his daily task, and is a duty owed not only to himself and his family but to his patients also. Some of us steal away now and then for a day's hunting or fishing, and others take a summer vacation of two or three weeks, but few of us understand the art of finding refreshment in the midst of daily toil, and yet to him who has the key it is an easy thing to do. The most refreshing rest is not idleness, but change of occupation, and none of us should allow himself to be so busy that a few moments cannot be spared for the prosecution of some favored study. Literature supplies an inexhaustible field for the pleasantest diversion, and a few minutes' daily communion with some congenial spirit of an older time can always be secured. Perhaps it might be best to pursue some specific line of study instead of wandering aimlessly, but there are times when the latter course possesses a peculiar charm. Physicians who never stray beyond the narrow limits of professional study can form no conception of the delightful sense of power and dominion and the complete independence of time and place imparted by general reading.

"I am master of the sphere,
Of the seven stars and the solar year,
Of Caesar's hand, of Plato's brain,
Of Lord Christ's heart and Shakespeare's strain."

Parson Adams owned no worldly goods and was a mere infant in the ordinary affairs of life, but he could say to his host, and truly, too: "I can travel farther in an afternoon than you in a twelvemonth." Perhaps many will find the pursuit of some scientific study more congenial occupation. If so, botany and astronomy and geology are within the reach of all. A country road can never be lonely while flowers bloom and the stars shine, and meadow streams carve the land and polish the stones. In the smallest back yard the abundant variety of insect forms will supply material to fill with entertainment and profit the leisure moments of a lifetime. The study of man himself in all the many phases of his development may appeal more strongly to others and herein will be found many things that will be useful to us in our technical labors.

And let us not forget another field for recreative work which we all should cultivate, not as a side issue only, but because it contributes so directly to the making of the full and rounded physician—medical history. There are mines of treasure here whose exploration is sure to reward us with profit as well as pleasure. We may gather much to in-

spire us even in our own neglected local field. How many of us remember Lining, whose experiments gave him international fame? Or Alexander Garden, "*facile princeps* among his colleagues," and probably better known outside of the medical profession than within it? Or J. Lawrence Smith, who was elected to succeed Sir Charles Lyell to the Institute of France, "the highest honor within the gift of the scientific world"?

These are only a few of the pursuits which physicians might cultivate as side issues to give rest to weary limbs and refreshment to jaded minds, as well as teach lessons which can never be learned in the daily hurly-burly. Our fathers appreciated the value of side issues, and if we would make an effort to follow in their worthy steps we would not only add bright hours to dreary days, but would bring around once more a generation of cultured men to uphold the best traditions of our past.

Church Temperance Societies on Patent Medicines.

A great deal of harm is often done by members of the clerical profession who, thoughtlessly no doubt, allow their names and photographs to be used for the purpose of advertising patent medicines. Many of these good men would doubtless be shocked if they realized that the preparations which they innocently advised people to drink depend for what little virtue they may possess upon alcohol, which is present, in most cases, in such amounts as to place the user in jeopardy of contracting the alcohol habit. We are glad to note that the special committee of the Church Temperance Society appointed to consider this question has recommended that decided action be taken, and we hope the influence of all the churches will soon be exerted in behalf of the good cause. The report, which we quote in full speaks for itself.

"The Special Committee of the Church Temperance Society, appointed at the meeting held Feb. 13th, 1906, to consider the subject of the promotion of intemperance by the extensive advertisement and general use of those proprietary medicines, the analysis of which has shown that they are largely composed of alcohol, cocaine, morphine, or other like ingredients that are notably injurious, respectfully report:

"1. Our investigations have made us certain that scientific and expert chemists are quite sufficient authority for our Church Temperance Society to state that certain well-known preparations for the cure of colds and catarrh, and the tonics for depleted systems, are deleterious to health, and distinctly encouraging the habits of intemperance.

"2. It is of painful interest and anxious concern to those who represent a Church Temperance Society to observe that a reliable secular magazine has been outspoken in its condemnation of the extremely immoral attitude of the religious press in general toward this subject, and also of the lazy habit of clergymen throughout the country in giving testimonials to any kind of patent medicine, when they are wholly ignorant, or are supposed to be, of the composition of such medicines.

"3. It is especially gratifying to observe that the clergy of the Episcopal Church are generally free from the stigma of the charge of giving personal recommendations to proprietary medicines, and also that in the condemnation of the religious press for the iniquity of advertising such medicines, such papers as *The Churchman, The Living Church,* and *The Standard* do not come under the ban.

"It ought also to be understood by the public that the Protestant Episcopal Church in the United States has no official organ, that so-called church papers are purely personal enterprises or private corporations, and that the church as such cannot be held responsible for the published articles or the printed advertisements in such papers.

"In view of these facts, your Committee would recommend to the three papers here named that by editorial, or in other way that their editors may see fit, this subject of the deleterious influence of Alcoholic proprietary medicines be fully exploited in their estimable columns.

"Your Committee would further recommend:

"1. That this Society carefully watch legislation at Albany, with intention at any available opportunity to support any reform measures on this subject, careful in doing so to advise with Boards of Health or trustworthy chemists and physicians to make their position tenable and their assertions true.

"2. That clergymen be requested both in direct conversation and public discourse, when advisable, to condemn the use of such dangerous medicines that are training a generation of drunkards, and above all to refrain from giving testimonials and lending their portraits for the benefit of patent medicine dealers, a thing that has already brought reproach upon the sacred calling, and is doing much harm to the cause of religion

"3. That these statements and recommendations of your Committee be sent to *The Churchman, The Living Church,* and *The Standard,* with the request of the Church Temperance Society that they be printed in an early issue of such paper.

"All of which is respectfully submitted,

"GEORGE R. VAN DE WATER (*Chairman*).
"ROBERT L. PADDOCK,
"ANDREW H. SMITH,
"JEROME WALKER,
"Committee."

The Recent Lowering of Fees for Life Insurance Examinations.

Several years ago the Equitable Life of New York and the New York Life Insurance Companies determined to reduce the amount paid for an ordinary examination from $5.00 to $3.00. The opposition to this made by the doctors was so great that both companies went back to the old rates.

Recently several of the old line companies, notably the Mutual of New York, the Equitable and the New York Life, have proposed a graded rate of fees, as follows: For $3,000 or less, $3.00. For over $3,000 and less than $25,000, $5,00. For $25,000 and less than $50,000, $7.50. For $50,000 or over, $10.00. An extra allowance of $1.00 is allowed where an additional specimen of urine is required. The companies claim that this reduction is rendered necessary on account of the tremendous pressure brought against them for the curtailment of salaries and expenses in every way. It is also claimed that the grade of policies written now are much smaller than formerly, and consequently the incomes derived from them are proportionately less. One of the reasons given for making the fee proportionate to the amount of the policy issued is that the applicant is better able to pay a larger fee for a large policy than for a smaller one. On the other hand, the doctors maintain that they have rendered a certain service and that they should receive a certain fee for the service renderd without any reference to the amount of the policy. It is generally considered that the fee for the chemical examination of the urine should be $2.00, and that for a full examination, including urinary analysis, should be $5.00. The insurance companies have entirely overlooked the fact that the service rendered by the doctors is far out of all proportion to the remuneration received. If an examiner, by his skill and knowledge, saves the company a $5,000 loss by one examination, he has saved them perhaps more than they will pay him in an entire lifetime. Therefore the medical examiners are the backbone and sinews of the company, as it is on the result of their work they fail or succeed. The companies will doubtless learn, to their cost, that they can ill afford to curtail the already meager fee paid to their medical examiners. It remains to be seen what action the state and county associations and the American Medical Association will take in regard to the matter. There are always a class of men who are so anxious for business that they will consent to anything in order to get it. It will be a great pity if this class is allowed to influence or control those who respect themselves and their profession more.

W. T. P.

ORIGINAL ARTICLES.

FLAT FOOT, FROM THE PHYSICIAN'S STANDPOINT.

BY THEODORE POTTER, A. M., M. D.
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The counterfeits of rheumatism make up one of the interesting and important groups of maladies with which all practitioners are called upon to deal. The word rheumatism has, in the popular, and even in the professional mind, such an indefinite significance that all of the aches and pains about the locomotive apparatus are apt to be classified loosely under this term. Hence, patients constantly come to us in private practice, and still more frequently in dispensary clinics, complaining of rheumatism, when in reality they are suffering from traumatic or other forms of lumbago, from Potts' disease, from sciatica, so often and so mistakenly called sciatic rheumatism, from incipient hip-joint disease, knock-knee, or rachitically bent bones, from flat foot or some other form of talipes, from metatarsalgia, the so-called Morton's disease, or from gonorrheal, scarlatinal, diphtheritic or other forms of infectious or toxic arthritis. When to these are added the various forms of traumatic, toxic, and trophic affections of muscles, of ligaments and other fibrous structures, all of which so often masquerade under the name of rheumatism, we can not but be impressed with the almost meaningless use of this word and with the need

for reform in this field of clinical nomenclature. And, while it is true that rheumatism may occasionally cause or influence some of those affections which are not usually rheumatic in origin, we must not overlook the fact that they are in most instances different in origin and course from the diseases of the joints and other fibrous structures resulting from acute articular rheumatism. And, as they are different in origin and course, so do they call for different treatment. This clinical fact remains true even though it be also true that we do not yet know just what is the real nature of rheumatism. Just so long as we keep up the old error of using the terms gonorrheal rheumatism and sciatic rheumatism, just so long will we help to perpetuate the diagnostic and therapeutic errors which follow. I have, in recent years, made it a matter of special effort to point out to students in dispensary and hospital clinics the danger of misusing this term rheumatism, and the mistakes in treatment which have resulted from it. The attention of the profession has of late been called to this matter of the classification of the so-called rheumatic disorders and of the clinical errors which attend it, notably by the papers and discussions at the last two meetings of the American Medical Association. There is a call for reform in the use of the term, and in the pathological and clinical conception of rheumatism, and this paper upon flat foot, from the standpoint of the physician, is chiefly intended as a contribution toward that happy end.

The human feet present two conspicuous arches, one antero-posterior, the other transverse. Into the normal anatomy of these arches, and their pathological anatomy in connection with the deformity called talipes valgus, or flat foot, I shall not enter more than to call attention to two or three facts of special clinical significance. I shall speak especially of the acquired form of the disorder, or of that form in which the foot, perhaps slightly congenitally deformed, becomes more distorted with passing years, or under special strains. When the arch of the foot lets down, the foot becomes flattened antero-posteriorly. At the same time the transverse arch becomes flattened, the foot rolls outward, and hence the prominence of the inner maleolus. The result of this mal-position in standing and walking is, first, a strain upon the ligaments; second, strain upon the tendons, and third, new points of pressure upon the bones of the foot and ankle. But this is not all. The mal-position of the foot may result in corresponding malposition and therefore strain upon the knee and hip joints. Hence, the person suffering from a considerable degree of flat foot is apt to suffer not only from these strains and new points of pressure in the foot, but in the knee and hip also. This latter fact explains some misleading symptoms which may suggest even strongly the mistaken diagnosis of rheumatism. With the strain upon ligaments and tendons comes pain in the foot and often in the leg. With the mal-position of the bones and the consequent development of abnormal points of pressure comes often that peculiar, deep-seated ache so suggestive of bone soreness. For, indeed, there is not infrequently developed a low grade of bone inflammation, and this is especially likely to occur and to present its characteristic symptoms if the arch has rapidly let down, the bones have become rapidly misplaced, and therefore the points of abnormal bone pressure have been rapidly assumed. It will readily be seen how such a condition of things may give rise to pain, tenderness, redness and swelling, closely simulating the local lesions of articular rheumatism. And if to these symptoms and physical signs in the foot there be added some pain, tenderness and even swelling at the kne, and pain and tenderness at the hip, the deception becomes all the more complete. If, further, there occur, in connection with this arthritis, which, under a rapid prolapse of the arch or some special strain of the foot, may assume an acute form, some slight fever and general malaise, it is not surprising that the picture of an acute articular rheumatism may be practically complete.

Acute articular rheumatism is, in a

large proportion of cases, polyarticular. And when the patient has had recurrent attacks, this feature of the disease is almost always conspicuous.

Chronic rheumatism, a quite different affection, is also usually polyarticular, begins usually after middle life, and is comparatively seldom a sequel of true acute rheumatism. The feet are not favorite seats of its election, especially in its earlier position. If these facts are kept in mind, they will go far toward eliminating errors in diagnosis between these diseases and flat foot.

The fact that a person has had so-called rheumatism confined to his feet for months or years should at once suggest the non-rheumatic character of his trouble, and that even without a direct physical examination.

The following cases will illustrate some of the points which I am endeavoring to emphasize:

Case 1.—Mr. H., aged 35, a commercial traveler, came to me some years ago complaining of severe rheumatism in both feet, together with distressing lumbago, which he described as rheumatism, in his back. He had suffered from these afflictions with increasing severity for a number of years, until he had become almost, and at times completely, incapacitated. He had, as he said, taken gallons of rheumatism medicines, had visited several of the neighboring mineral springs, had gone to Hot Springs, Arkansas, all without any considerable or lasting relief. Examination revealed typical flat feet of high degree as the cause of all his trouble. An operation should probably have been done, but, refusing this, his disabilities were in a fair degree relieved by the application of braces, under the direction of the late Dr. Morsee. This case illustrates the too common error of applying the term rheumatism to the disorders caused solely by flat foot; the production of severe and obstinate lumbago by the same foot deformity, and the unfortunate expenditure of time and money by the patient, and his arrival at a high degree of deformity and suffering, all because of the loose use of the term rheumatism coupled with and doubtless partly responsible for failure to carefully examine his feet.

Case 2.—Mr. B., aged 27, foreman in a wholesale hardware store, had suffered from repeated attacks of acute articular rheumatism, affecting many joints, including his feet. I had seen him in several such attacks. He had for years had some trouble with his feet, and each succeeding attack of rheumatism left him with this trouble increased until he was at times almost unable to walk. He obstinately insisted that the rheumatism had become chronic in his feet. But, my attention being called to it, I recognized the typical lesions of flat foot and, with some difficulty, persuaded him to seek surgical aid. Under mechanical treatment, including the wearing of properly adapted shoes, his chronic rheumatism of the feet disappeared and he was able to resume and continue his work. This case illustrates the fact that true articular rheumatism may cause or aggravate a letting down of the arches of the feet. At the same time it illustrates the importance of distinguishing between the poly-articular causative disease and the resulting purely local deformity. For while this man's attacks of rheumatism were promptly controlled by medical treatment, no amount of medication did or could have cured his flat feet.

Case 3.—Mr. S., aged 30, a commercial traveler, in the winter of 1897 changed his occupation and became a clerk in a retail store. Here he was constantly on his feet for many hours daily and until nearly midnight on Saturdays. As a result, he began to suffer from what he called rheumatism in his feet, the deception being increased, in his own mind and in mine, by the fact, afterward made plain, that the handling of heavy articles had strained and given rise to pain and soreness in his shoulders, wrists and back. He went to Martinsville Springs, rested, bathed, became much better, and returned to his work. He was accustomed to ride a bicycle to and from his store, and, with the advent of hot weather, adopted the prevailing fashion of wearing soft bicycle shoes, which gave little support to the arches of his feet.

Losing this support, and being constantly on his feet, his muscles relaxed by the hot weather, he came to me complaining of what he thought, and what closely resembled, an attack of acute rheumatism in his feet. His feet were painful, tender, the ankles red and swollen. The pain extended up his legs, the knees were painful and tender, and the hips were also somewhat painful. With it he had a slight fever, headache and general malaise. My suspicions being aroused by the suggestive history of his change in occupation and habits, I was led to a diagnosis of acute flat foot instead of acute rheumatism. Appropriate treatment resulted in prompt and lasting relief from his suffering and disability.

Case 4.—Mr. G., aged 38, a railroad brakeman, had suffered with increasing severity for years with what he supposed to be rheumatism in his feet, but which I found to be simply flat foot. So severe had his suffering become that he had been forced to give up his position. I shall call attention to only one interesting feature of his case. Being told that he was not suffering from rheumatism, he at once became interested because, he said, he was always worse in summer, and he had himself thought it strange that his rheumatism should thus increase with the warm weather. The explanation was not far to seek. In common with railroad men, he wore heavy, stiff-shanked shoes in winter, which supported the arches of his feet. In summer he changed to thin, light-soled shoes, which let down the arches and soon gave rise to an increase in his pain.

I will not further multiply the relation of cases illustrating the symptoms of flat foot and the reasons for the frequent failure to recognize it. Sufficient has been said to show how often and why it may give rise to symptoms suggesting and even closely simulating rheumatism, and to warn us all to be on our guard lest, through persistence in the slipshod use of the term rheumatism, together with failure to properly examine people suffering from painful feet, we subject ourselves to mortification and our patients to needless suffering. Let us remember that the man who complains of persistent rheumatism confined to his feet is usually the subject of talipes.

BRONCHOPNEUMONIA.*

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A careful study of the subject of pneumonia necessarily carries one into the history of the development of the science and art of medicine, and discloses the fact that in some respects we are far in advance of our forefathers, while in others we have made but little progress, indeed, may have retrograded. Pneumonia continues to show such an alarming rate of mortality, and even increasing, that it is no wonder all the scientific world seeks a specific. New York City has recently appointed a commission of learned clinicians and pathologists to make a special report upon this disease with the hope that something may be done to stay its ravages. For many centuries inflammations within the chest cavity have been recognized, but not until auscultation and percussion as means of diagnosis were discovered, was there any successful attempt to differentiate the different forms of pneumonia.

To recall to your minds the intellectual darkness preceding these discoveries, permit me to quote from a valuable work, which I show you here, by William Cullen, professor of practice in the great University of Edinburg in 1785—two hundred and twenty-one years ago. Chap. VI. Pneumonia, or pneumonic inflammation. Under this title I mean to comprehend the whole of the inflammations affecting either the viscera of the thorax or the membrane lining the interior surface of that cavity; for neither do our diagnostics serve to ascertain exactly the seat of the disease, nor does the difference in the seat of the disease exhabit any considerable variation in the state of the symptoms, nor lead to any difference in the method of cure. As bearing upon the causes we shall discuss further on, I beg to quote again from the

* Read before the Fourth District Medical Association, Greenville, S. C., Feb, 5th, 1906.

same author: "The pneumonic inflammation has been sometimes so much an epidemic as to occasion a suspicion of its depending upon a *specific contagion*; but I have not met with any evidence in proof of this."

Cullen made many dissections of persons dead from pneumonia, including children, and described with considerable accuracy pathological lesions, but still he was ignorant of the different forms of the disease as we know them to-day.

About a quarter of a century after the publication of these observations, Laennec, the distinguished French physician, gave to the world his stethoscope. But, strange to relate, the different forms of inflammations within the chest were very obscurely portrayed even a hundred years later, by a number of writers I examined. And just at this point I shall speak more definitely of bronchopneumonia. I have been unable to learn the exact time and by whom the disease was first clearly diagnosticated. It is probable, however, that one of the first decided efforts made in this country to extricate the term bronchopneumonia from the tangled skein of more or less confusing synonyms, was William Pepper, in 1885, in Pepper's System. He begins his article on this subject thus: "Bronchopneumonia: Lobular pneumonia. Although numerous other names have been used to designate this affection, it is undesirable to perpetuate them. To Delafield, of New York, in his pathological anatomy published about this time, belongs much of the credit for clearly defining the condition. No small influence at this period and later was the improvements in the microscope, and greater skill in the art of auscultation and percussion. I shall be only too glad if I prove to you that I am speaking of a disease which may well command the attention of the most learned among you, and thus inspire you with greater zeal in a fight which has by no means yet been won—viz.: the easy diagnosis of the affection and its satisfactory cure. No person is exempt from bronchopneumonia, and hence do not permit yourselves to be lulled into a careless attitude when you have before you a patient under four years or over sixty, and therefore feel safe in *guessing* you have a case of bronchopneumonia. To understand its protean symptons which I shall not weary you with reciting, requires a profound knowledge of anatomy, physiology and pathology, especially of the child, for it is in childhood that by far the greatest number of cases are seen. The causes are not even yet all clearly understood. The relatively smaller air cells in the child is a great factor. Cold is certainly a marked predisposing cause. So great an authority as Loomis in 1890 states that bronchopneumonia is always secondary. Holt, however, in his latest work, 1905, gives us the results of his extensive observations and in an analysis of the relative frequency of lobar and bronchopneumonia in 370 cases in the New York Infant Asylum, found 261 bronchopneumonia, 109 lobar pneumonia, and in another series of 426 cases found 164 primary, and the rest complicating bronchitis, measles, pertussis, diphtheria, acute ileocolitis, scarlet fever, influenza, varicella and erysipelas. We are indebted to bacteriology for much of our recent knowledge in regard to the causes of bronchopneumonia, which has again been briefly summarized by Holt as follows: In the primary cases the pneumococcus is nearly always present, and in a large proportion of the cases it occurs alone. In cases of mixed infection it is most frequently associated with the streptococcus, and next to this the staphylococcus pyogenes aureus. In the secondary cases a large variety of bacteria may be concerned.

One of the most common complications which you are each one in general practice meeting daily is influenza. I show you here some fine specimens of these potent causes of bronchopneumonia as we know it to-day.

These discoveries have led to the placing of bronchopneumonia in the category of infectious diseases, and I here exhibit one of the first books within my knowledge, translated from the German and published in September, 1905, Modern Clinical Medicine: Infectious Diseases.

Professor Leyden, of Berlin, writes exhaustively in this volume of pneumonia. So much for the etiology. A disease which at one and the same time may have actually in progress these various organisms, with their peculiar lesions, exhibiting an apparent lobar pneumonia, perhaps, in one section of the lung, a pleurisy in another, a number of scattered consolidated lobules no larger than a quarter dollar, various stages of engorgement of the air cells and bronchioles, and yet resolution at still other points, believe me, requires no mean skill to differentiate. The physician should be familiar with every known aid in diagnosis and be master of auscultation and percussion. The ear should be cultivated in immediate auscultation, but just the same as the high power of the microscope is necessary to bring into clear view the whole picture, so is the stethoscope necessary. I show you one (1) used by many pediatrists, which has a ¾-inch bell, and is very important in examining a small spot in a small lung—especially in the apex and high in the axilla. The phonendoscope is valuable, as it intensifies the sound, and can be used over the clothing if demanded. Be familiar with all these methods if you would be fully armed. The treatment of bronchopneumonia, a disease which may run ten days or as many weeks, having no definite time to cease at the mandates of *vis medicatrix naturae*—can not be carried out like that of lobar pneumonia, and as I saw Professor Osler do some years ago. In presenting a case of a young child, he said: Gentlemen, the treatment of many cases of lobar pneumonia depends largely upon the age of the doctor. If you have just graduated and hung out your shingle, you would better give the patient purges, expectorants, and use mustard plasters, blisters and poultices freely. If you have practiced ten or fifteen years, you may be less strenuous and leave off some of these remedies—but if you have reached the age of fifty, you can treat the patient from beginning to end as you have seen me do without a single dose of medicine. There has been no specific serum yet forthcoming that offers much hope of cure, and, as I remarked in the beginning, we may have made but little progress in the treatment of pneumonia. We have almost abandoned bleeding and blistering, which are no doubt sometimes valuable—and it is interesting to note that the learned and celebrated Dr. Arbuthnot, nearly two hundred and fifty years ago, in England, used these words in speaking of the treatment of pneumonia: "The steam of warm water taken in by the breath serves as a kind of internal fomentation and helps to attenuate the impacted humors." Holt, in his recent book, says: Inhalations are of more value in relieving cough and in promoting bronchial secretion than any other means we possess. I have been informed that he has regular steam chambers for the treatment of his hospital patients. I have nothing new to offer you in the treatment of this disease. Hygiene is of the greatest importance. I combat high temperature with the warm bath, sponge or pack. These cases bear cold poorly, as a rule. Counterirritation is of great value all around the chest with mustard, and kept up for days, applied at intervals. The cotton batting jacket is useful and also hot poultices in some cases. Dovers powder in very small doses is worth much to relieve pain and cough. The stimulants I depend upon are strychnia, whiskey or brandy and aromatic spirit of ammonia. A good nurse, with all that good nursing means to-day, is, as in enteric fever, the physician's greatest ally. I have paid the very closest attention to the best methods of dieting these little patients, and have felt myself rewarded many times. In conclusion, I beg to present the latest thought from the greatest center of clinical medicine in the world to-day, as recorded by Professor Leyden, of Germany, and as a summary of his treatment of pneumonia. At the present time therapy is an art, or, better, the artistic waging of a battle against disease. The weapons for this battle, i. e., the individual therapeutic remedies and methods, may be shown, their manner of action and indications may be described, and, in general, the plan for proper treat-

ment may be indicated—but something still remains, the proper choice and use of remedies suitably and correctly chosen according to the special indications of the disease and the peculiarities of the patient. Under the present complex conditions, the practical physician in the special case must himself select what is suitable. The result will always depend upon his firmness, care, and decision, which are partly the results of good training, but to an equally great degree are qualities of endowment, and dependent upon his own personal culture.

SOME REMARKS ON LACHRYMAL STRICTURE, WITH EXHIBITION OF NEW INSTRUMENT.*

J. W. JERVEY, M. D.,
GREENVILLE, S. C.

Concerning the detailed *modus operandi* of tear drainage from the conjunctival sac, little is vouchsafed in the text books on the eye. The canaliculi, lacrymal sac, and nasal duct of each eye are of course designated as the drainage canal. The actual process of this drainage is, however, a mooted point. Capillary attraction, gravitation, and suction from the nasal chambers in the process of breathing, are various theories. The first and last of these are doubtless worthy of serious consideration, as being partial agents. The gravitation theory, I should say, might be summarily dismissed as untenable. An individual standing on his head is not unduly annoyed by epiphora, whatever his other sensations may be.

To my mind it is probable that the contractions of the orbicularis palpebrarum muscle toward its point of origin, as observed in the frequent act of nictitation, or blinking, cause a marked dilatation of the lacrymal sac, while the fibres from Horner's muscle, which twine around the canaliculi, contract concomitantly, and while shortening , at the same time enlarge the lumina of these little passageways. The nasal end of the duct is marked by a slit-like opening in the mucous membrane under the inferior turbinate, and is guarded, in probably all normal cases, by valvular action.

However, regardless of the theories of physiological lacrymal drainage, it is a rather common thing to meet with stricture or even atresia at some point in the canal, from the punctum to the nasal orifice. In the vast majority of cases these strictures are directly due either to catarrhal swelling of the mucous lining in the canal, or to the formation of fibrous connective tissue bands as a result of chronic inflammation. Treatment, especially of the latter class of cases, is usually unsatisfactory. The old surgical motto: "Once a stricture, always a stricture," holds good in the case of the lacrymal canal, as it does referring to the urethral passage.

Dilatation (with, of course, appropriate topical applications) is the principal indication. This is accomplished usually by means of a series of graduated probes. I regret to say that I believe it to be largely habitual with many eye surgeons to split the canaliculus before introducing a probe. In fact, I have had more than one well-known ophthalmologist inform me that it is practically almost never possible to probe the canal without this preliminary splitting, and I have seen a good many eyes thus summarily dealt with, and with ultimately very unsatisfactory results.

However, it can readily be demonstrated that it is not only possible but extremely easy and simple to pass lacrymal probes up to any reasonable size through the vast majority of canals without recourse to the severance of a single fibre of tissue. The anatomy and physiology of the parts demand that surgery in these cases should be scrupulously and consistently avoided unless imperatively necessary. Occasionally the punctum may be safely split for a distance of not more than about two millimeters.

I have here a little instrument which I was enabled to perfect about two years and a half ago, which can almost always

* Read before the Tri-State Medical Association of Virginia and the Carolinas, White Stone Lithia Springs, S .C., Feb. 27-28, 1906.

be passed (after slight dilatation of the punctum) the entire length of the lacrymal canal with no preliminary surgical intervention whatever. You will readily see the principle upon which it works (Exhibits Jervey lacrymal dilator, made by Meyrowitz, N. Y.). It has the conspicuous advantage of exerting most pressure at the point of greatest constriction, and, while dilating the passage, permits antiseptic flushing with a syringe at the same time.

The whole process, including dilatation to any desired extent, can be accomplished entirely painlessly, after suitable preparation with adrenalin and cocain. And let me say right here that in these cases, no less than in other surgical conditions, *a painless procedure* means a *pleased patient.* It is an altogether worthy goal to strive for, and very satisfactory when attained.

In these cases, as in others, when cutting is unavoidably necessary, I cut—in authoritatively prescribed fashion; but a million or so years of evolutionary development have perfected structures and functions in the human system which I do not care to attempt improvement upon by surgical solutions of continuity unless insistently compelled to do so.

I do not claim any extravagantly astonishing line of cures with this little dilator. However, I have been enabled to get more satisfactory and lasting results by its use than by any other method; and a number of intelligent patients formerly treated in the old-fashioned way by myself and others have felt and appreciated its usefulness. If properly and carefully used, I believe it will prove itself, and I present it on its merits.

REPORT OF CASE.*

J. B. HUGHEY, M. D.,
GREENWOOD, S. C.

Tuesday, February 20th, 1906, I was called to see Frank A., aged 15 years, a strong, muscular boy.

History.—He was taken sick with nausea and vomiting Saturday night previous. He was given some domestic remedies and was better Sunday. Was feeling badly on Monday, cough bad, expectorating some bloody sputa. He was given some purgative remedy, and was easier towards night and fever cooler, but during the night became very restless and distressed, with fever high and painful cough. At 8:30 a. m. Tuesday this was his condition: Temperature 103 4-5°, respiration 40, pulse 110, cough painful, expectoration scanty and frothy, stained with blood, an anxious, distressed expression of countenance. Physical examination revealed the lower lobe of right lung solid, fine crepitant rales in the middle lobe. The tongue had a heavy coat of light brown. Stools had been frequent, of dark color and offensive odor.

Diagnosis.—Pneumonia, with lower lobe consolidated and middle lobe in the congestive stage.

Treatment.—Four tablets, each containing ½ gr. calomel and ½ gr. podophyllin; one given every hour. These were given for their therapeutic effect, viz.: antiseptic, laxative and diuretic, also to stimulate the secretory and excretory cells of the whole body. These were followed in regular order by a dose of ½ ounce castor oil, for its well-known effect of stimulating peristalsis and evacuating the foul, undigested contents of the intestinal tract. Thus, by these remedies, through their therapeutic effect, I hoped to reduce the toxemia and, as it were, to set up again that vibratory electric current so essential to physiological cell function, which had evidently been broken. I also gave at once four drops of tr. aconite root, followed every hour by two-drop doses. This was also given for its legitimate therapeutic effect, viz.: the reduction of the power and frequency of the pulse beat by slowing the heart action and dilating the arterioles of the whole body. Thus in large degree relieving the local engorgement and giving the leucocytes room to work and perform their normal police duty. In the afternoon there was slight improvement all

*Read before the Greenwood County Med. Society March 5th, 1906, and by request of Society sent to the JOURNAL of the South Carolina Medical Association.

along the line. Was restless during the night, but did not require an anodyne. Hourly doses of aconite were kept up.

21st, Wednesday, 8:30 a. m.: Temperature 102, respiration 34, pulse 95, soft but full, expectoration free and easy, with but little blood. Lower lobe still consolidated. Anxiety and distress of countenance very much relieved.

To the hourly doses of aconite was then added 3 grains quinine every four hours and 4 grains mur. ammon., 2 gtts. tr. aconite rad, 1-15 grain sparteine. I made this addition because I had a consolidated portion of lung. The quinine was given for its leucocytosis and stimulating effect. The ammonia was given to soften the mucus blocking the lung and to stimulate its expulsion by cough. The aconite to reinforce that already being taken. The sparteine was given to slow and strengthen the heart's action, also to assist the aconite in its vaso-dilator effect.

4:30 p. m.: Temperature 101°, respiration 25, pulse 85. No blood in sputa. A dose of ½ ounce castor oil was given as stools were still dark, with some odor.

22nd, Thursday, 9 a. m.: Had rested well during the night and had gentle perspiration since 4 o'clock. Temperature 100°, respiration 22, pulse 68. Rales gone from the middle lobe, which was found to be clear. Same treatment continued except the hourly doses of aconite were put to two hours with instructions to extend to three hours if the perspiration increased or return to hourly doses if it dried up. These instructions were not carried out and, as a result, the afternoon temperature ran up to 102°. The middle lobe remained clear and there was no more bloody sputa. The hourly doses of 2 gtts. aconite restored and ½ grain calomel and ½ grain podophyllin given.

23rd, Friday, 8:30 a. m.: Temperature 101°, respiration 22, pulse 75. Not much expectoration, but what there was caused but little effort and consisted of large, heavy, cream-colored lumps.

5 p. m.: Temperature 100°, pulse 70, soft but plenty of volume. Expectoration free and copious of the heavy, creamy sputa. Air was passing freely into the lower lobe. Appetite for the first time became insistent. There had been but little nourishment taken up to this time. Bowels moved freely, with bright yellow stools. The hourly doses of aconite put to two hours, with caution to stop entirely if perspiration increased too much and to give a little whiskey if much depressed.

24th, Saturday, 8:30 a. m.: Temperature 99°. Wanted to get up and had the strength to do it. A few coarse rales left. Little cough and expectoration. I ordered him to remain in bed twenty-four hours longer. Three grains quinine every six hours, 4 grains mur. ammon., 2 gtts, aconite, 1-15 grain sparteine, 6 hours, were continued. Liquid nourishment freely.

4 p. m.: Temperature 98 2-5°. Resting well and in a good humor, eating all he could get.

25th, Sunday, 9:30 a. m.: Temperature 98 2-5°, respiration 18, pulse 70. The whole lung clear, no cough and had slept well all night. Was very hungry and anxious to get out of bed.

I ordered light diet in liberal quantities; 3 grains quinine every 6 hours for two or three days; allowed him to get up and dismissed the case.

ILEO-COLITIS.

C. C. GAMBRELL, M. D.,
ABBEVILLE, S. C.

Mr. President and Gentlemen—

As was announced at our last meeting, our subject for to-day is "The Summer Complaint of Babies." On investigation I find this term embraces too many diseases for me to cover in this paper, so I have endeavored to confine myself to Ileo Colitis, or Dysentery, in children during the second summer of their lives.

Ileo-Colitis, as the term implies, is any inflammation of the ileum and colon, but for consideration we will divide this into three different varieties, viz.: Acute Catarrhal Ileo-Colitis, Follicular Ileo-Colitis and Membranous Ileo-Colitis.

Etiology.—All the above forms are considered infectious. They may occur

as acute primary diseases, but more often in this climate follow diarrhea which has been produced by overfeeding on milk of a poor quality, or from some fruit or vegetable diet given the child by a careless nurse. This diet may be loaded with bacteria or act as a fine medium in which the bacilli which are already in the intestines may and can thrive. Also acting in many cases as a mechanical irritant, inflaming the mucous membrane and allowing the bacteria an entrance to the deeper structures.

Flexner has demonstrated that in the majority of cases the disease is not wholly due to the amoeba coli, but largely to the mixed infection. The principal etiological factors we have to deal with are usually one little strawberry, just one mouthful of potatoes, beans, bananas, green apples, lemon peeling, peaches, and quite a number of other harmless things that adults are accustomed to eat with relish.

Symptoms.—In simple acute Catarrhal Ileo-Colitis, the symptoms in a case seen early are very unsatisfactory. You will usually find the temperature elevated, ranging from 99 to 104. Pulse excited, skin moist and cool, feet cold and head hot, and child restless. The abdominal muscles relaxed or distended, according to the amount of gas in the intestines.

The mother will give you a history of the child's bowels having moved two or three times during the morning, with a few streaks of blood in the actions. On examining the stools you will find them very acid, with marked odor, and containing undigested curds of milk and food, also a quantity of mucus and blood. On inspecting the child's buttocks, you may find them inflamed, and very much irritated. At first there is little tenesmus, but later on it will be increased. Vomiting may occur, but as a general thing it does not until after the second or third day, when the nerve centers are more involved by the poison. In most cases the child is very restless, and if the temperature is not controlled, it will have convulsions. The appetite is very much lessened, and you will have trouble to get the child to take nourishment enough to sustain strength.

In follicular Ileo-Colitis all the abovementioned symptoms are very much more marked. The child does not respond to treatment unless a few follicles only are involved. The majority of cases die during the second week of illness. Pseudo Membranous Ileo-Colitis is very rare. It is the form that is usually spoken of as sporadic dysentery. It is diagnosed by the very high temperature from the outset. Temperature ranging from 105 to 106. The stools are composed almost entirely of blood and mucus from the intestines. The child very rapidly becomes emaciated and usually dies within three or four days.

Diagnosis.—Ileo-Colitis is diagnosed from fermented diarrhea, by the continued fever, the more frequent discharges and the small quantity in each stool, the presence of blood and mucus and the tenesmus. Ileo–Colitis is diagnosed from cholera infantum by the absence of continuous vomiting, thirst and the serous watery stools, as well as the physical appearance of the little sufferer.

Prognosis.—The prognosis in simple acute ileo-colitis, without ulceration, is very favorable, but few cases where ulceration takes place get well. They will often hold on for weeks and weeks, but usually succumb. The majority of cases, however, where treatment is instituted early will get well in from ten to twenty days, but they are usually slow in regaining their normal strength.

Practically all of the cases of follicular and membranous variety die usually before the diagnosis is made.

Treatment.—Treatment should be instituted early, but this we seldom have an opportunity of doing, for most parents will try all kinds of teething powders, soothing syrups, or simply say the child is teething, and will not do anything until the disease has gained great headway, and is producing marked systemic effects. To begin your treatment, you should first withhold food or decrease it to the minimum. If it is a breast-fed baby, tell the mother she must nurse it only at stated intervals; if it is

a bottle-fed baby, you had better stop the milk at once, and put it on chicken or beef soup, barley or rice water, or one of the prepared foods, very much diluted. One of the best substitutes in my cases has been the old-fashioned kettle tea with just enough milk in it to color the water. If you will put a small amount of sugar in this, the child will take it with great relish. It is a very hard matter to decide at first what you will resort to as a foodstuff, for in this matter you will find that the mother has had so many suggestions from outsiders that she will be very much prejudiced against nearly everything you may suggest, or will prepare it in such an indifferent manner that you cannot be certain what it will contain when she gives it to the little sufferer.

Sterilized or boiled water with ice and lime water added should be given often, in fact it should be offered to the child every few minutes. In over two-thirds of the cases of ileo-colitis, the children do not get enough water to drink, many parents telling you the child drinks too much water, and I guess this is true, if the water is not of a suitable quality.

My first medicinal treatment is to give the child a medicine that will unload the intestine of any irritating foreign matter that may be in it, and at the same time act as a soothing agent to the inflamed mucous membrane. I find castor oil one of the best for this, and to a child one year old I give one or two teaspoonfuls, adding to this a few drops of turpentine or paregoric. Following this oil I give an antiseptic powder containing calomel, bismuth, salol and soda. The calomel in this mixture not only stimulates the flow of the bile, which is a fine antiseptic, but is one of the best antiseptics itself. The bismuth is a metallic astringent and coats over the inflamed surface of the mucous membrane, thereby stopping the irritating effects of the intestinal secretions. Salol is said to be a very fine intestinal antiseptic, but it does not seem to be lauded so highly now as in former years. The soda is given to neutralize the intestinal juices and thereby helps to allay the inflammatory effects. Usually, in addition to the above powders, I leave a few powders containing Dovers powders, bismuth and acetanelid comp. These powders are to be given every three or four hours, if the child continues restless and the fever high. The opium in the mixture allays nervousness, reduces the tenesmus and usually produces a refreshing sleep. The bismuth is given for the same purpose as above stated, for all the authorities tell us we must give it in large doses to get a good effect, consequently I am never afraid of giving too much in these cases. The acetanelid comp. is a good alkaline antiseptic, as well as one of the safest antipyritics. It also helps to allay nervousness. You will find that by giving these little patients a few hours' quiet sleep their chances of a rapid recovery are much augmented. The above treatment is about all I do for the first twelve hours. At the end of this time, if my patient is not better, I begin either a castor oil emulsion or a saline mixture, alternating with an astringent mixture. The castor oil mixture I usually use is composed of two drams castor oil, one and one-half drams bismuth, four drops carbolic acid, two drams listerine, one dram camph. tr. opii, one ounce ess. of pepsin, chalk mixture comp. two ounces.

The saline is composed of the following: Two or three drams sulph. mag., one dram tr. opii. camph., four drams aq. camph. and ad. menth. pip. enough to make two ounces.

The astringent mixture is composed of one dram tr. kino, one dram bis. sub nit, one dram tr. opii camph., one ounce ess. pepsin and mist. cretae co enough to make two ounces.

In addition to the above treatment I wash out the child's lower bowel once a day, using about one quart of sterilized water to which I add one teaspoonful of common salt. I often add to this one teaspoonful of borax, or boracic acid. In giving these colon injections, I prefer to use the regular Holt's colon tube. I find it is much stiffer than the soft rubber catheter recommended by some, and another advantage it has over the catheter

is your stream of water comes in direct contact with the mucous membrane of the bowels, and not to one small area on the side, as is the case with the catheter. If the fever is very high, I prefer cold water to warm. Whether I use warm or cold water, I leave a little in the bowels, for it will help to relieve the inflammation and replace the great quantity of fluid the system has been drained of. If the child is suffering pain and tenesmus, I have found a hypodermic of morphine 1/100 grain and atropine 1/800 grain to do incalculable good. Starch water and laudanum in small quantities thrown up the rectum has been highly recommended by Rotch and others. I have never tried it, but can readily see how it would give the desired relief. Neither have I tried the much-lauded cocaine suppositories, but I think they should be tried where other remedies have failed.

For supportive treatment, I rely on panopepton, peptonoids, brandy, beef or chicken broth. These should be given at frequent intervals, day and night, and in small quantities so as not to derange the stomach. In extreme cases, they should be given by enema, and especially when they excite vomiting.

In 1903 Flexner was experimenting with a serum for these cases, but as yet it has not appeared on the market, and I judge his efforts were a failure.

Tannic acid, 30 grains to a pint of water, and thrown high up the colon, has been highly recommended by some to decrease the amount of blood in the stools, but I have never obtained any marked results with it. It may have been that my solution was too weak, or did not get high enough up to reach the inflamed area. My experience with nitrate of silver has been equally disappointing. I think, as a general rule, we put these two drugs off as the last resort, and then discredit them if we do not get any good results, when, if they had been used earlier, our results would have been different.

For the inflammation about the anus and buttocks, which produces such pain after each movement of the bowels, I have found that ten drops of carbolic acid added to one ounce of oxide of zinc ointment will relieve in one or two applications. It is a good practice to inspect often every child's anus and buttocks suffering with ileo-colitis, so that you will be able to stop these symptoms as soon as they appear. Mothers, as a general rule, will not mention it until the child gets so badly irritated that it will scream with pain every time the napkins are removed. These excoriations are much more easy to relieve in the beginning than when they have extended over the entire buttocks.

The after treatment of these cases is very important. You should return to diet gradually, and its effects on the alimentary canal should be watched closely. During convalescence it is not medicine they will need, but easily assimilated diet, plenty of pure, fresh air and out-of-doors life. The majority of my cases not being financially able to go to the mountains or seashore as recommended, I send them to some kind relative living a few miles in the country.

TREATMENT OF WOUNDS.

G. A. NEUFFER, M. D.,
ABBEVILLE, S. C.

For a proper understanding of our subject this morning it is necessary for us to first determine what constitutes a wound, and second to consider the various kinds of wounds; for all wounds do not require the same treatment. A wound is defined as "a sudden solution of continuity in one or more of the tissues of the body"—such a lesion occurring in bone or cartilage is, by common consent, called a fracture; and, although it is really a wound, it does not come within the scope of this paper.

Wounds are operative and accidental or intentional, and this has an important bearing both on the treatment and on the result to be expected. Operative wounds are wounds inflicted by the surgeon, for we must remember that every time we use the knife on a patient, no matter how small an operation it may be

from the lancing of a boil to doing a laparotomy, we are inflicting a wound—and this teaches us that we should make every effort to secure asepsis in small operations as well as large ones. And here it might be well to speak of the difference between antisepsis and asepsis. The meaning of antisepsis is "opposed to putrefaction." This implies, of course, that we already have putrefactive changes going on in the wound, and that we are using means and remedies to stop them and to restore the wound to a normal healthy condition. The meaning of asepsis is absolute surgical cleanliness. If we secure asepsis, we prevent any putrefaction, any poisoning, any sloughing in the wound; then we have the surgeon's desideratum. In inflicting operative wounds, the surgeon has every advantage, and should always obtain surgical asepsis. He has the time to prepare everything—to prepare his patient, to prepare the room (in major operations), to prepare his instruments, his dressings, and to prepare himself.

In accidental and intentional wounds, and these wounds in so far as the surgeon is concerned, present to him the same conditions, it is almost impossible to secure asepsis; the nature of the wound and the surroundings under which it was inflicted usually prevent such a result. Therefore, in these wounds, it is our duty to come as near asepsis as possible by making use of the most improved methods of antisepsis.

We now come to study the different kinds of wounds. These may be classified under five leading heads: Incised, punctured, lacerated, contused, perforating or gunshot wounds—any of these may become inoculated with a virus or venom—it is then a poisoned wound.

An incised wound is made by a clean cut with a sharp instrument; these generally bleed more at first than other kinds of wounds.

A punctured wound is caused by a narrow instrument which penetrates but does not cut laterally. These are considered the most dangerous of all wounds, because from their depth they are liable to implicate blood vessels, nerves, viscera and other deep-seated parts of importance. Because matter when formed has no free exit, and is likely to burrow extensively. Because they are most liable to be followed by tetanus.

A lacerated wound is made by a dull instrument, which tears the tissues. These wounds are attended with less hemorrhage than the incised, both because their surface being irregular renders it easy for the blood to adhere and coagulate, and because arteries, when torn, do not bleed so much as when cut, but in other respects they are infinitely more serious. They are liable to inflame violently and slough, they are often complicated with foreign bodies, and are liable to occasion severe constitutional disturbances and tetanus.

A contused wound is one in which the tissues are more bruised than separated.

Perforating, or gunshot wounds are caused by missiles projected from firearms. They partake of the nature of three of the varieties of wounds already enumerated—the punctured, the lacerated and the contused—and present the dangers of all three of them. In gunshot wounds, shock is usually more severe than in other kinds.

Having given you a definition of what constitutes a wound, and made a brief study of the different kinds of wounds, with the characteristics of each, we will now take up the main question—the treatment of wounds.

When the process of repair secures the union of divided surfaces without stupuration, we have what is called healing by first intention or primary union. This is the ideal to be sought for whenever possible.

In the treatment of wounds there are four principal indications:

First—To arrest hemorrhage.

Second—To cleanse and remove foreign bodies.

Third—To bring the divided parts into apposition, and keep them so.

Fourth—To protect the wound from infection.

To stop bleeding is the first care of the surgeon in his treatment of a wound. The aim of the surgeon should always

be to secure the arrest of bleeding by means that shall cause the least disturbance in the future repair of the wound. Unnecessary ligatures are therefore always to be avoided. The size of the thread used for a ligature should be as small as is consistent with the strength required to occlude the vessel. The first and most generally applicable means for restraining hemorrhage is that of direct pressure made upon the bleeding point. This may be by the finger or by an instrument as a pressure forceps. In many instances the temporary use of pressure will be all that will be required for the arrest of hemorrhage that at first was very abundant. When copious and continuous capillary oozing persists, it may frequently be controlled by pressure with compresses wrung out in water as hot as can be borne by the hand. The use of heat as a hemostatic is to be preferred to cold, as being more favorable to local nutrition and subsequent active repair. The use of hemostatic forceps is a very efficient and convenient means of applying pressure. Many vessels which at first bleed freely, after a few moments of compression in this manner will no longer bleed when the forceps are removed. If the bleeding persists, torsion may be applied, which, being effectual in many instances, will reduce the ultimate need for ligatures to a minimum.

Of course, there are numbers of vessels that are too large, or that bleed with so much force that the best thing to do is to ligate them. In making a ligation, catch the bleeding point with a pair of artery forceps, and have the forceps held by an assistant. The selection of your forceps is important as there are innumerable styles and shapes of hemostats, and a great many of them are so constructed as to make it almost impossible to tie the artery, but you will find yourself tying the end of the forceps instead I will show you some of the latest patterns. When you make your tie, always make your first knot, which we all know as the double-reef, or surgeon's knot This will not slip. Then tie two ordinary knots. The material most generally used for ligatures is silk.

As a rule, hemostatic agents which produce tough clots of blood, as the salts of iron, or which are strong irritants, such as turpentine, or which destroy tissue outright, as the actual cautery, are to be avoided. Often when continuous oozing persists from a wound under a mass of soft blood clot, if the wound is freely opened and the accumulated clot thoroughly removed, further oozing becomes definitely arrested. A dilute solution of iodine has both hemostatic and antiseptic properties, and may sometimes be used with advantage. Iodoform added to a compress applied upon a bleeding surface has a distinct hemostatic effect.

From among all these resources the surgeon will be called in a given case to make use of those which shall be available, efficient, and least harmful.

Cleansing and removal of foreign bodies: The removal of foreign bodies will be much easier, both for patient and surgeon, if done at once than if delayed till inflammation sets in. Great care should be taken to remove from a wound all foreign bodies, whether they enter from without, as dirt, gravel, pieces of clothing, shot, wadding, etc., or be formed within, as pieces of bone, torn muscle, or blood clots. The means required for effecting such cleansing and removal must be adapted to the nature of the material to be removed. The forceps, scissors, curette, sponge, irrigating stream, each may find its use. The irrigation of a wound with normal salt solution will aid greatly in removing foreign bodies. When, however, a wound is already contaminated, it will be a good practice to irrigate it thoroughly for a considerable period of time with a germicidal solution of sufficient strength to secure the destruction of whatever septic material may have gained access to it. A solution of carbolic acid, 1/40, or of bichloride of mercury, 1/1,000, will be found most generally suitable for such a purpose. In those wounds where it is not possible to secure and maintain perfect cleansing, we must provide for drainage by packing lightly with some antiseptic gauze. Iodoform, boric, salicylic or iodosyl gauzes are used. The last named I have found

equally as efficient and free from the odor of iodoform gauze.

To bring the divided parts into apposition and keep them so: In the coaptation of wounds the aim of the surgeon must be to bring the several parts as far as possible into the same relations with each other as existed before the wound was inflicted. When important nerves, muscles and tendons have been divided, especial care must be taken to bring and secure together the divided ends. In bringing a wound together, much tension must be avoided, when operative wounds are drawn too tightly, stitch hole abscesses will result. When tissues are put unduly upon the stretch in an effort to bring them together, the circulation of the blood within them is impeded, nutrition is impaired, the formation of sloughs is invited, and suppuration promoted. We must also be careful to avoid strangulation of any portion of the tissue. Sutures too tightly drawn frequently cause necrosis of the wound edges.

The principal method of securing coaptation is by sutures. There are various kinds of sutures, but the interrupted is the one in general use. Catgut and silk are the materials that sutures are chiefly made of, silk being of most universal application. Whatever form of thread is used should have been rendered aseptic by previous preparation.

To protect the wound from infection: In the treatment of a wound after hemorrhage has been checked, its surface has been cleaned and purified, coaptation has been accomplished, and drainage provided for, a suitable dressing must be applied. Two main objects are to be accomplished by a dressing. First, the absorption of whatever secretions may come to the surface; and second, the protection from infection, injury and motion. Septic infection is to be guarded against by covering the part with soft and absorbent material that will receive and keep aseptic the discharges that drain away from the wound, and that will prevent the access of septic infection from other sources to the wound.

The best dressing is one of the standard sterilized gauzes, this to be covered by absorbent cotton, using very voluminous dressings, thus giving additional security against the conveyance of infection from without, and to protect it more certainly from mechanical violence and from motion.

Changes of dressing are made at long intervals, and thus rest is secured to the injured part while repair is going on. As to when such changes are required, the temperature is the most important indication, and the thermometer can be relied upon as an index to the character of the process going on in the wound. If, after an elevation of one or two degrees above normal for the first forty-eight hours after a wound has been inflicted and dressed, the temperature becomes normal and remains so, the surgeon can be assured that there is no reason for interference. If the temperature remains elevated, or rises again after having been normal, you may rest assured that things are not right within and that inflammatory and suppurative disturbances with retention of secretion and septic absorption are going on, and of course, a change of dressing is necessary. When the dressings become wet from secretions from within, you must change your dressings. If you have suppuration with sloughing, the dressings must be changed from day to day, or twice a day, often enough to provide sufficient drainage and cleansing of the wound. You should observe strict antisepsis in every dressing.

COUNTY NEWS.

LEE.

At the annual meeting of the Lee County Medical Society, held at Bishopville, S. C., on March 6, 1906, the following members were present: Drs. R. Y. McLeod, President; A. C. Baskin, Vice-President; L. H. Jennings, Secretary and Treasurer; J. B. Bullock, A. H. Brown, B. L. Harris, C. S. Britton, T. D. Foxworth, J. E. McLure.

The following officers were elected for the year 1906: Dr. J. B. Bullock, President; Dr. J. E. McLure, Vice-President; Dr. L. H. Jennings, Secretary and Treasurer.

Dr. B. L. Harris was elected delegate to the State Medical Association.

A Board of Censors was elected, as follows: Dr. A. H. Brown for the term of three years, Dr. T. D. Foxworth for two years, and Dr. C. S. Britton for one year.

The following resolution was unanimously adopted:

First—That we will not examine an applicant for insurance in an old line company for a fee of less than $5.00, nor an assessment company for less than $3.00.

Second—That the Secretary send a copy of these resolutions to every Life Insurance Company represented in Lee County, also a copy be sent to every County Medical Society in South Carolina and that the South Carolina Medical Society be notified of this action and that it be requested to uphold us in the same.

Dr. Le Grand Guerry of Columbia, S. C., gave an able, interesting, modern and scientific lecture on "Gall Stone."

Dr. Walter Cheyne of Sumter, S. C., gave a very instructive and practical discussion on "Nephritis."

The following resolutions were adopted on the death of our late brother, Dr. E. F. Darby:

First—We deeply lament the untimely death of our honored friend and brother. He was gifted in his chosen profession. None were endowed with more grace and skill than he; always ready to lend a helping hand to those in distress; ever ready and instrumental in organizing the profession. He was blessed with an intellect which few have, and was trained in the best schools of our country.

Second—That a copy of these resolutions be enrolled on a page in our minute book, also a copy be sent to the bereaved family, and a copy be sent to our county paper.

A resolution of thanks to Dr. Guerry and Dr. Cheyne was adopted by a rising vote. The society then adjourned to Durant Hotel for dinner, to meet again the first Tuesday in April at 11 a. m.

UNION.

RESOLUTIONS OF RESPECT.

At a meeting of the Union County Medical Society, held at their rooms on Monday, April 2nd, 1906, a committee was appointed by the President, C. Torrence, to draft resolutions upon the death of Dr. Wales G. Fike, a member of said Society.

WHEREAS, God, in His allwise providence, saw fit to remove by death Dr. Wales G. Fike from this earth on March 30th, 1906, be it

Resolved, first, That we bow in humble submission to His will, yet feeling that our Society has lost a most zealous, conscientious and honorable member.

Second—That the medical profession at large has lost an intelligent, ethical and charitable physician, and that the State of South Carolina has lost a good and faithful citizen; and be it further

Resolved, third. That the sympathy of the members of the Union County Medical Society be extended to the family of Dr. W. G. Fike.

Fourth—That a page upon the minutes of said Society be dedicated to his memory, and that a copy of these resolutions be published in the papers at Union, and in THE JOURNAL of the South Carolina Medical Association; also that a copy of said resolutions be sent to the immediate family of Dr. W. G. Fike.

C. W. AUSTELL, M. D.,
S. G. SARRATT, M. D.,
M. W. CULP, M. D.,
Committee.

OCONEE.

The Oconee County Medical Society met at 1 p. m. on March 2d, 1906, at Seneca, S. C., at the Palmetto Hotel, with the following members present: Drs. J. H. Stribling, President; E. H. Hines, J. W. Bell, C. M. Walker, W. R. Doyle, B. F. Stone, H. E. Rosser, D. L. Smith, Secretary.

Previous minutes read and approved.

Dr. E. A. Hines, Seneca, read an interesting paper on "Bronchopneumonia.

Dr. J. H. Stribling read an article from the *Councilor* on "The Nostrum Evil."

Dr. W. R. Doyle offered the following resolution:

Resolved, That no member of the Oconee County Medical Society make an examination for any old line insurance companies for a fee less than $5.00.

Resolved, That the Secretary notify all members that are not present to-day, by card.

Dr. Rosser moved that each member of the Society furnish the Secretary with a list of their delinquent "Dead Beats" every six months, and he to make up a list and send out to each member.

After discussion, Dr. Stone moved that a committee of three be appointed to devise some plan and report at our next meeting.

The following members were appointed to prepare papers for our next meeting, at Westminster, on April 11th: Drs. H. E. Rosser, McCutchen. Dr. W. H. Nardin, Jr., of Anderson, is invited to deliver a paper at the same time.

D. L. SMITH, M. D., *Sec.*

CORRESPONDENCE.

PRIORITY OF DR. BAKER'S OPERATION FOR PUS TUBES.

Washington, D. C., March 10, 1906.

To the Editor:

DEAR SIR:—

I have read with much pleasure the excellent paper by Dr. A. E. Baker on "Pus Tubes" in THE JOURNAL of November 21, 1905. The paper in every respect is admirable and we have no criticism to make of the paper itself, for it is a model of terse statement and correct and practical teaching. But the admirable technique which Dr. Baker calls "his method" has been used by many surgeons for years past. The writer has the unchallenged honor of having introduced practically the same plan of removing pus tubes more than ten years ago. See a paper in Trans. Amer. Med.

Assn. held at Atlanta, Ga., Section on Diseases of Women. Title, "How to Remove Pus Tubes Without Rupture."

Yours very truly,

I. S. STONE, M. D.,
Surgeon to Columbia Hospital.

NOTES AND REVIEWS.

Practice of Medicine and Clinical Medicine.

JOHN L. DAWSON, M. D.

DIET IN TYPHOID.

Claytor's treatment of a case of typhoid fever, no matter on what day of the disease it may come under his care, is as follows: The regulation six ounces of milk are given every two hours, night and day, while the patient is awake. In place of milk, in order to vary the monotony for those who can take milk, and as a substitute for those who can not, animal broths are given. After the subsidence of the more acute symptoms the patient is asked if he is hungry, and if he replies in the affirmative a soft-boiled or poached egg is allowed, and if well borne the number is gradually increased to three or more a day. Jelly or blanc mange, custard, soft toast, the soft part of a baked apple, and rice which has been boiled four hours, are the next additions. After this scraped beef or chop, very finely divided chicken, and baked potato are tried. Claytor does not advocate so full a diet in every case, for each patient must be carefully studied as an individual. He believes that most of the foods mentioned are quite as digestible, far more palatable, and rather less likely to cause perforation or hemorrhage by their local action, or gas production, than milk.—T. A. Claytor, Washington, D. C. *Medical Record*, N. Y., March. 17.

CAUSE OF EPILEPSY.

Lerch advances the theory that the basis of epilepsy is a diseased brain, congenital or acquired. The widely accepted theory of autointoxication he considers, with the rest of etiologic factors, as a remote cause producing congestion and edema. He thinks that the large number of patients in whom a neuropathic constitution and epilepsy can be traced directly, and the large variety of lesions that are found in the epileptic brain favor the correctness of his theory. He says that the same train of symptoms, occurring under the most varied conditions, in patients of all ages, uninfluenced by sex, climate and disease, calls for one direct cause to produce the attack. This cause is congestion and edema.—O. Lerch, *American Medicine*, Philadelphia, March 3d.

TREATMENT OF DIPHTHERIA.

Rhodes believes that the very slightest excuse should be sufficient for the diagnosis of diphtheria in a child. Even so slight a sign as dryness or a parched appearance of the external nares in a child who seems poorly nourished is sufficient to indicate, in most cases, that diphtheria toxin is being manufactured, probably in the nasopharynx. He holds that diphtheria antitoxin never does any harm to a child and that it will assist in curing illness due to some disturbance in the throat or nasopharynx, even if that illness is not actually due to diphtheria. The time lost by delay in giving antitoxin in diphtheria is often sufficient to render the chance of recovery very small. Rhodes states that, though many experienced workers in the field of infectious diseases insist that very large doses are much more efficacious than small ones, sufficient stress is not laid on the fact that small doses , even though given late in the disease, will often just turn the scale in favor of the patient, or at least assist the patient to fight the disease and to hold it in check until the child can be taken to a hospital, where more antitoxin can be given. Finally, if every general practitioner would carry a syringe and one phial of antitoxin much more antitoxin would be given before the child is removed to hospital; the necessary delay in getting the antitoxin at present, and the difficulty, sometimes, in obtaining it, especially in country districts, being possible reasons why this treatment is not adopted immediately in all cases.—T. B. Rhodes, *Brit. Med. Journal*, Feb. 17th.

THE LATEST VIEWS OF TYPHOID INFECTION.

Kutscher reviews the recent evidence which shows that persons may harbor the typhoid bacilli in their bodies for years after an attack of typhoid fever and thus prove a source of contagion for others at any time. The bacilli seem to lurk in the gall bladder after they have vanished from all other points in the body. No means have yet been discovered of annihilating the lurking bacilli. Women seem to predominate among these chronic "bacilli-bearers." Contact infection is assuming more and more importance, and the principles of successful prophylaxis must be the same as for cholera and malaria. The chronic bacilli-bearers should be excluded from such occupations as are liable to spread infection, especially in dairies.—"Kutscher," *Berliner Klinische Wochenschrift. Epidemologie der Abdominal Typhus.*

MATERIA MEDICA AND THERAPEUTICS.

J. L. NAPIER, M. D.

SPARTEINE—ITS DOSAGE, PHYSIOLOGICAL EFFECTS, AND THERAPEUTIC USE.

Pettey writes an article on this subject in the *Georgia Practician* for November, 1905. He asserts that sparteine is one of the most valuable remedies in our Pharmacopœia, but it is comparatively unknown to the profession. Not only are its properties not generally known, but its dosage is so completely misunderstood that there is little chance for them to become known. It is a remedy of great value, because it does most perfectly what no other remedy or combination of remedies does, and while doing that it does not have other effects which are undesirable. In other words, we can depend upon sparteine to make one important therapeutic impression without its making other impressions that we do not want made.

Sparteine is the alkaloid derived from *Cytisus Scoparius*, our common broomcorn. Since the misunderstanding as to its dosage is doubtless the reason that it is not in common use, the author calls attention to that part of his subject first. Most of the authorities give the dose of sparteine as from 1/6 to 1/3 grain. The U. S. Pharmacapœia, just issued, states the dose to be 1/5 grain, but the manufacturers of hypodermic

tablets make no tablet larger than 1/10 of a grain, and few of them list a tablet larger than 1/30 of a grain. Hypodermic tablets of these sizes are the form in which it has usually been tried; but many practical men, after trial of the drug in these quantities, and being unable to develop the desired effects, have thrown it aside as of no value, when had the proper dose been given the result would have been otherwise. The fault was not with the remedy, but with the size of the dose.

Bartholomew is the only author, of those whose writings the writer has examined, who states the dose at anything near the proper quantity. He puts it at from ½ to 2 grains, but from 1½ to 2 grains would be more nearly correct. In fact, 2 grains, by the stomach, is as small a dose as can be depended upon. One and one-half grains hypodermically is a fairly effective dose, but there is no reason why the hypodermic dose should not be 2 grains also. It is a non-toxic drug, as truly so as quinine; it is as certain and definite in its effects as quinine; and in the writer's experience it above all other remedies deserves to be classed as a heart tonic. It does just what we want done when we administer a heart tonic, without doing what we do not want done. It combines the desirable effects of digitalis and veratrum without their undesirable effects. Since physicians are so familiar with these two remedies, the author compares the effects of sparteine with them.

Digitalis is a true heart tonic so far as its effect on the heart itself is concerned; but, while it adds tone to that organ and lessens the frequency and increases the force of its action, it powerfully contracts the entire arterial system and greatly raises blood pressure, thus increasing the resistance to the onward flow of the blood current. So marked is this effect that it is probable that it adds to the work of the heart as much as it increases its strength; therefore as a heart tonic it is comparatively useless.

Veratrum, on the other hand, reduces the force and frequency of the heart's action, and at the same time dilates the arterial system, thus reduce the blood pressure and opening up the way for the onward flow of the blood current; but this action is attended by great depression, nausea, and other undesirable effects. If we could develop the effects of digitalis on the heart muscle accompanied by the effects of veratrum on the arterial system, without any of the other effects of these two remedies, we would have the ideal heart tonic. In sparteine we have a remedy that does this very thing. It adds to the tone of he heart muscle as greatly as digitalis, reduces the frequency and increases the force of the heart action as does digitalis, but instead of contracting the arterial system and raising blood pressure as digitalis does, it has directly the opposite effect. While it does not dilate the arterial system so greatly as veratrum does, it does so to a marked degree, but without any of the unpleasant effects of that drug. Especially marked is its effects upon the arterial capillaries; in this respect it resembles belladonna; however, its effects are not confined to the superficial capillaries, as in the case of belladonna, but extend to the deeper capillaries as well. Under its influence the pulse is soft, full, and compressible, instead of hard and unyielding as from digitalis. Its action is prompt. If given hypodermically its effects are well established within an hour, being in that respect very unlike digitalis, but in point of duration of effect it is again like digitalis, the effect lasting from six to twelve hours. In fact, it has almost the promptness of strychnia with the sustained effect of digitalis.

In the matter of correcting irregularities of heart action it should be given first place. It corrects these with great promptness, and the sustained effect of the drug makes its frequent administration unnecessary. An initial dose of two grains should be given, and it should be repeated in two or three hours. After that it need not be administered oftener than every four to six hours.

While sparteine is a remedy of the greatest value in all conditions that demand regulation or support of the heart, it is in pneumonia particularly that it fills a place that no other remedy or combination of remedies fills equally well. In that disease we have an overworked heart, high blood pressure, pulmonary and general venous congestion, and death usually results from failure of oxygenation of the blood due to exhaustion of the heart. Sparteine counteracts the development of this condition more perfectly, and does more to correct it after it has developed, than any other drug of which the author knows. It decreases the frequency and increases the force of the heart action, imparting a reliable degree of tone to the heart muscle. At the same time, by dilating the arterial system and reducing blood pressure, it relieves the heart of its burden, thus enabling it to handle the volume of blood without laboring, and to throw an ample current to the lungs, where the improved capillary circulation which it produces promotes abundant oxygenation. It does this without a single unpleasant, undesirable, or hurtful effect; in fact, the only other effect of the drug is one that, in pneumonia, is needed almost as badly as the one just described. Its power to improve the arterial capillary circulation renders it a most certain and efficient, non-irritating diuretic. All will recognize this as a most desirable effect.—*Exchange.*

BITTERS AS AN AID TO DIGESTION.

It has been found that bitters do not of themselves increase the flow of gastric juice, but now it appears that they do act in that manner if food is taken immediately after their ingestion. This has been demonsrated experimentally in the case of the dog by Straschenko, and his findings have been confirmed. Thus it is evident that the simple omission, in previous experiments, to give food after the bitters vitiated the value of the investigation. All this is set forth in a communication recently read at a meeting of the Hospital Medical Society of Paris, the work of J. Nano and F. Nironesco, of Bucharest, presented by M. Rogers (*Bulletins et mémoire de la Société médicale des hôpitaux de Paris*, Nov. 23).

The Bucharest experimenters add an interesting observation of their own. It is to the effect that the bitters which they employed on the human subject, for the most part tincture of cinchona, not only produced a decided increase in the flow of gastric juice when their administration was followed by feeding, but also gave rise to a notable augmentation of the amount of hydrochloric acid in the secretion. Therefore we may conclude that in the particular form of gastric inadequacy termed hypochlorhydria bitters serve a most important purpose, and we may further in-

fer in general that their use, long sanctioned by experience, now rests upon the solid foundation of laboratory investigation.—*New York Medical Journal,* Dec. 16, 1905.

THE RATIONAL USE OF INFANTS' FOODS.

In the course of an article bearing this title, and published in the *Clinical Journal* of November 22, 1905, Sutherland, after pointing out the evils of these foods, says that apart from actual illness there are times when fresh cow's milk is not obtainable, as on board ship or on a long railway journey. Again, fresh milk may be obtainable, but there may be an epidemic in the neighborhood, and the milk supply may have fallen under suspicion. In such cases the physician will be called on to advise, and condensed milk of a good brand is probably the best temporary substitute for a healthy infant.

In all cases in which these more or less unnatural foods are being used certain rules of procedure ought to be followed as safeguards both of the infant's health and the doctor's reputation.

1. In acute illness a return to natural feeding should be made before the patient is discharged.
2. In chronic illness no "infants' food" should be continued longer than is absolutely necessary. If the infant is apparently thriving well on the food, it will in all probability actually thrive better on a fresh milk diet.
3. In all cases in which a predigested or preserved food has been used for more than two weeks, orange or grape juice (half an ounce) in water should be given daily to avoid the risk of scurvy.
4. Under similar circumstances the addition of fresh cream or cod-liver oil to the diet should be made as soon as possible, because the fatty element is usually deficient in all "infants' foods" (as prepared for use), and is specially essential. —*Exchange.*

OBSTETRICS AND DISEASES OF CHILDREN.

LANE MULLALLY, M. D.

What is the Best Method of Treating Uterine Inertia? (*Therapeutic Gazette,* February.)

Grandin advocates prophylaxis and recommends for those women who lack nerve tone, strychnine grs. 1-60 and quinine gr. 1, three times a day during the last months of pregnancy.

When the child has been delivered, he does not immediately proceed to deliver the placenta, but waits until the uterus has recovered its tone. If no other causes present themselves, he packs the uterus well with gauze, and states that as a rule, when the gauze is removed, within thirty hours, the uterus contracts.

Jewett does nothing for simple inertia when the patient can sleep and eat and the membranes are intact.

When indications for prompt delivery appear, he uses hot and cold compresses over abdomen, alternating one with the other. He recommends quinine in 5 to 10 grain doses, or else strychnine gr. 1-30 every four hours.

For inertia occurring during the second stage of labor his treatment is the same as for the first stage. He recommends forceps for inertia occurring after full dilatation of os.

Polak gives morphine gr. ¼, atropine gr. 1-150, and packs the vagina with gauze if the membranes are unruptured and inertia comes on.

Polak recommends strychnine grs. 1-30 every half hour until 1-5 gr. is taken, provided the pains have been strong, and then gradually diminish in force and frequency.

For inertia following the third stage of labor, he recommends ergot friction and uterine tampon.

Manton recommends for simple inertia quinine, strychnine and strong, black coffee.

E. P. Davis (*American Journal of Obstetrics*), in an article entitled "Appendicitis Complicating Pregnancy and Parturition," reports six cases as typical of various phases of the subject. He quotes Treves as saying that it is impossible to distinguish clinically between chronic appendicitis and chronic ovaritis.

Davis also quotes from Heaton, who says that mild attacks of appendicitis may not interfere with pregnancy in the early months, but if suppuration occurs danger is enormously increased and pregnancy almost invariably interrupted. In those mild cases when the inflammatory process has apparently subsided, after labor or miscarriage, pelvic inflammation of the right side may develop, which frequently goes on to suppuration, and in these cases it is impossible to tell without operation whether the Fallopian tube or the appendix is the cause of the trouble. Appendicitis may occur at any time during pregnancy and may be primary or secondary. The vomiting which accompanies the attack may be mistaken for the vomiting of pregnancy. Appendicitis during pregnancy runs a rapid course; suppuration usually develops, and pus when formed must be evacuated as soon as possible.

While the cases reported by Davis were not cases where the suppuration occurred, still Davis claims they emphasize two points: the good result of operation in early pregnancy in appendicitis, and the fact that where a severe appendicitis has occurred. Whether during pregnancy, or when the patient was not pregnant, it is an important complication in the pregnant condition, for adhesions following appendicitis may bring discomfort and danger to a patient who becomes pregnant after recovery from disease of the appendix.

Davis concludes his article by urging that the appendix be removed in pregnant women as soon as inflammation attacking that organ can be diagnosticated; remembering the impossibility of differentiating between inflammation of the right Fallopian tube and ovary, and inflammation of the appendix complicating pregnancy, operation should be done without waiting to make a positive diagnosis that the tube is inflamed and the appendix not affected, or that the contrary is the case.

GYNECOLOGY.

C. M. REES, M. D.

In the April number of the American Journal of Obstetrics and Diseases of Women and Children, Dr. Wilmer Kousen gives a paper on "Embolim Following Abdominal Section," a subject of importance, to which little attention has been given. The subject selected is simply emboli following celiotomy. In a review by Dearborn

(Annals of Gynecology and Pediatrics, Nov., 1904) of the work of twenty-five surgeons of Boston and vicinity, it is shown that thrombosis and embolism are more common after operations in the pelvis than after operations in any other part of the body. Further, that it is possible that many cases of pleurisy, pneumonia and pulmonary abscess following operation are due to emboli. Large emboli almost always cause speedy death by syncope or asphyxia; very small emboli usually run a favorable course.

Dearborn says that any sudden increase in pulse rate during convalescence, the temperature remaining almost normal, should remind one of the possibilities of thrombosis, and that if there are evidences of phlebitis or of thrombosis, absolute rest in bed must be insisted on. Agnew observes that "after operations in which much blood had been lost, there is always more or less tendency to the formation of coagula. This may take place in the vessels of the extremities, and by forming an obstruction to the circulation, cause the limb to fall into a state of gangrene. From the same tendency to the coagulation of blood a clot may form in the heart to destroy life. He has seen both these accidents occur. Hence he says it is of the first importance that patients thus predisposed should be kept perfectly quiet and in the recumbent posture. Any considerable effort, such as sitting up in bed, when the power of the heart has been lessened, and the vessels deprived of a large amount of blood by an operation, exposes the individual either to a fatal syncope, or to the formation of obstructive plugs of fibrin." Thrombosis may result: (1) After a prolonged or severe operation; (2) as a result of sepsis in the wound; (3) where neither of the above conditions obtain. If thrombosis due to stagnation of blood occurs, it occurs during the formation of the clot, most commonly about a week or ten days after the operation, though it may take place very much earlier than this, and it may occur as late as the third week.

In a résumé of 7,130 gynecological operations, Schenck reports 48 cases of thrombosis. He points out that this complication is much more common after operations in the pelvis than after operations in any other part of the body.

LARYNGOLOGY AND RHINOLOGY.

W. PEYRE PORCHER, M. D.

In the *Journal of Laryngology* for March appears an article by C. P. Linhart, of Columbus, Ohio., on "Some Evils of Mouth Breathing." There is no subject so far-reaching as this, nor one that is more frequently overlooked.

In view of the modern germ theory of disease, it is remarkable that the full significance of this condition is not more often dwelt upon and the laity educated up to it. It is difficult to condense this article, because the truth cannot be eliminated without weakening the force of the argument or injuring the substructure. I must therefore reproduce the article to show the importance of it.

"In trying to find the origin of many cases of chronic pharyngitis, my suspicions were attracted to mouth breathing as one of the common causes of this complaint. With scarcely an exception, patients suffering from chronic pharyngitis have more or less difficulty in inhaling sufficient air through the nose. This is particularly noticeable when exercising briskly out of doors during the cold and damp season of the year. If anyone should take the trouble to observe the people on a cold winter morning as they walk to their places of business he would be surprised at the number who are inhaling the cold, raw air through the open mouth directly into their lungs. The thin and delicate membrane of the pharynx and the larynx is utterly incapable of giving moisture to, and heating the air to its proper condition before entering the lungs. The cold air over-stimulates the vasomotor nerve endings controlling the small capillaries of the throat. There is first a contraction and blanching of the membrane from the cold, followed by a relaxation of the capillary walls, and a pouring out of the secretion from the mucous glands in this region. The work that this membrane is called upon to do is entirely beyond its capabilities, it becomes thinner, the patient complains of a dryness in the throat, and in course of time the result is a chronic pharyngitis.

The question as to the original cause of mouth breathing would seem a little difficult to answer. Very young children, I think, as a rule, have little difficulty in breathing through the nose. It is only in later childhood, subsequent to the hypertrophy of the adenoid tissue in the vault of the pharynx, and hypertrophy of the tonsils, that the children begin to breathe through the mouth.

It seems proper to suggest that our habits of living are such as to bring about these very conditions. In the first place the children are often housed in over-heated and ill-ventilated rooms, and coddled in heavier wraps than is necessary for their health. This hot-house preparation illy prepares them for the vigorous and sudden changes that they undergo in passing from these warm rooms into the winter air. These sudden changes are probably a strong factor in bringing about the congestion of the mucous membrane and underlying tissue of the turbinates in the nose, and increasing the hypertrophy of the glandular tissue in the pharynx.

'Does not the continual tropic house warmth actually reduce the tone of the tissues and make them more susceptible to bacterial invasion? The thought is naturally suggested that perhaps cold air has hygienic as well as therapeutic uses. We rather look upon hot weather as relaxing and destructive of vitality, and expect health with return of cold weather. Brook trout perish if the water they breathe is raised only a few degrees in temperature. There is enough in this matter to cause us to think about it a little. If so many cured tuberculous patients are now sleeping in cold air every night and living in it in the daytime, too, as much as possible, perhaps the rest of us are only injuring ourselves by the opposite course. Only a few years ago the cold-air fiend who slept with windows wide open in the coldest winter, was considered a crank. Perhaps he will prove to have been the only sensible one among us, and was merely imitating the ways of his ancestors who had practically no way of warming their houses.'

As it is the function of the turbinates to supply sufficient moisture to the air and properly regulate its temperature as it passes into the lungs, it naturally follows that the air must be made to pass through the nose over the turbinates in order that they may be in proper condition to do their work.

One of the probable evils of mouth breathing in early life, is the raising of the palatine arch by undue pressure from the inhalation of air through the mouth. This excessive arching of the hard palate, which is also the floor of the nose, encroaches upon the space in the nose. During development the septum would naturally grow so as to fill the space allotted to it in the nose. Now that the space, as has been shown, is consequently narrowed in its perpendicular diameter, and it naturally follows that the septum will bend to one side or the other. Where a person has high-arched palate we expect to find either a deflected septum in the shape of a large curve, or a sharp kink or spur. The latter is nearly always seen along the line where the vomer joins the perpendicular plate of the ethmoid.

A popular impression prevails that deflections and spurs of the septum are caused by a blow on the nose some time during development. While it is easy by suggestive questioning to get a history of an injury to the nose, in almost every instance of deflected septum, I usually find that when the patient volunteers the information of a blow on the nose, that the injury has been sufficient to cause considerable thickening of the whole septal wall, from the consequent inflammation, which is not found in ordinary septal deformities.

There is no doubt that mouth breathing, with its consequent high arching of the palate, is responsible for the peculiar shaping of the face seen in many children suffering from adenoids. It is also a factor in causing the protruding and misshapen teeth of the upper jaw. Dr. C. A. Hawley tells me that in looking over twenty-nine plaster casts of corrected deformities of the teeth from narrowing of the upper jaw,, he found nineteen with histories of operations for removal of adenoids. These cases were taken at random, and he further states that he had no doubt that some of the others had nasal or post-nasal obstruction. Dr. Hawley called my attention to another interesting point; that a high-arched palate and narrow posterior nares might have the relation to each other of cause and effect.

The secretion of the nose is more or less bactericidal. The dust in the air on entering the nose is filtered through the moistened vibrissae, and also becomes deposited on the viscid membranes of the turbinals, consequently the mouth-breather, lacking this natural protection, is most susceptible to bacterial invasion, and on account of the discomfort and annoyance of breathing through the mouth will not inhale as deeply as he ought. Therefore there is not sufficient oxygenation of the blood and consequent lack of body tone.

There is no doubt that considerable disturbance to digestion is caused by allowing the mucopurulent material from the naso-pharynx to get into the stomach, in fact, it is next to impossible to prevent young children from swallowing it. I had a patient who had been troubled with indigestion for several years, tell me that it entirely dtsappeared after being relieved of this annoyance from a chronic nasal catarrh. I venture to say that the fermentative changes which take place in the mouth of a mouth-breather, have an injurious effect on the salivary secretions sufficient to interfere materially with the digestion of starchy foods, and this in turn would lessen the stimulative effect on the peptic glands of the stomach.

Breathing through the nose develops the muscles that dilate the nostrils, consequently we find narrow nostrils in mouth-breathers. Furthermore where the obstruction in the nose is confined to one side it naturally follows that the narrow nostril will be on that side.

I have had a number of cases of pharyngeal irritation that I could trace to no other cause than a partially occluded nostril, and it seemed to me that the air volume being so much heavier on one side gave it a corkscrew motion as it passed down the pharynx. This whirling and uneven pressure of the air might cause an irritation of the throat by producing an unusual dryness in one part and too little in another. This would account for the little inspissated lumps of mucous found in this class of cases, in the vault of the pharynx. Of course, one must take into account the fact that so large a volume of air passing in one nostril would not get the heat and moisture that it would from both sides more nearly equal in caliber. Whatever the cause, there is always a marked improvement where the entrance of air through each side of the nose is more evenly balanced.

If we accept the foregoing statements of facts, it is easily understood how the habit of breathing through the mouth is so difficult to overcome, and the importance of keeping a clear passageway in the respiratory tract of children is apparent and it becomes evident that whenever there is any hindrance to normal breathing even from a transient "cold," it should have immediate attention. Any obstructions should be removed by surgical means, and the patient encouraged in his effort to breathe through the nose. Even later in life when the bones of the mouth and nose are completely ossified, the openings of the nares can be enlarged by proper breathing exercises.

The following are recommended for keeping the nose in a normal condition: Cool living rooms, well-ventilated sleeping rooms, cold bath, especially for the neck and spine, dry clothing, simple foods, regular habits, moderate daily exercise and exclusive nasal breathing."

Reference is again made to the dessicating effect of formaldehyde solution upon mucous membranes and its efficacy in rhinorrhea, acute rhinitis and ottorrhea. Some persons have even the electric cautery with good effect in an acute rhinitis to reduce the tumescent turbinate but of a simple application of a drug which would not leave a scar tissue behind it would be all the better.

DEEP INJECTIONS OF ALCOHOL FOR RELIEF OF NEURALGIA.

Oswalt's communications on this subject have recently reviewed in these columns, page 390. He here reports 45 cases of severe chronic facial neuralgia cured by this simple means. He adds a little of some local anesthetic to the alcohol, and slowly injects it for what he calls the "temporary gasserectomy." After from five to seven days he repeats the injection, if necessary, but once is usually sufficient. He follows Schlosser's technic closely and has found the procedure effectual, even for treatment of certain cases of spasmodic contracture and for sciatica.—*Exchange.*

OPTHALMOLOGY AND OTOLOGY.

EXAMINATION OF THE EYES OF PREGNANT AND LYING-IN WOMEN.

EDWARD F. PARKER, M. D.

Examination of the Eyes of Pregnant and Lying-in Women.—Dr. Polte (from the eye clinic in the University of Halle, A. S., *Klin. Mon. fuer Aug.*, 1905, ii, p.

Polte examined with the ophthalmoscope 200 pregnant women and 177 after delivery. Of the former 178 were healthy, 18 had albuminuria and 6 out of these eclampsia, 1 morbus maculosis, 3 pyelitis. As a rule, the fundus was normal in the 178 pregnant, 116 of which were in the last month. Symptoms similar to those in neuritis, as found by Bosse in 75 per cent. of women during gravidity, could never be ascertained. Only in 2 cases a certain white fovea of the disc was observed *postpartum*, which before birth had the same red tint as the remaining portions of the disc. In the third case the borders of the disc, indistinct before delivery, were well defined after it. Only 1 out of the 6 eclamptic cases presented slight ophthalmoscopic changes which had subsided on the first day of the puerperium. Five out of 10 cases of albuminuria with casts had chronic nephritis. Two with albuminuric retinitis are reported in detail. During labor nothing abnormal was observed, excepting slight hyposphagma in 3 cases.

Polte's investigations do not corroborate the assertion of Bosse that ophthalmoscopic changes are frequent during pregnancy.—[C. Z.]—*Exchange.*

VERNAL COJUNCTIVITIS IN THE NEGRO.

DUNBAR ROY, M. D.

A study of ten cases of corneal disturbance in the negro has been made, which, in the opinion of the author, were cases of bulbar vernal conjunctivitis. No palpebral lesions existed. There was present at the sclero-corneal margins elevated, circular, waxy and gelatinous looking masses, extending from ½ to 4 mm. into the cornea. The subjective symptoms were not severe. They all proved very untractable to treatment, and the condition came on every summer and lasted through the warm months. He believes that it is quite possible that the different views expressed upon vernal conjunctivitis are largely due to different aspects of the disease in different localities. An extensive report from Prof. H. F. Harris on his findings from examinations of shavings from the hyperplasias of the cornea of some of the negroes' eyes is given.[M. B.]—*Exchange.*

PHOTOGRAPHING THE INTERIOR OF THE EYE.

"An apparatus, by means of which it has become possible to obtain good photographs of the background of the eye has been devised by Dr.. Walther Thorner, of the University Eye Clinic in Berlin

This result, though long desired by oculists, has hitherto been found impossible. Dr. Thorner has, however, accomplished this important step in the treatment of eye diseases. His contrivance constitutes a material improvement of the ophthalmoscope invented by Helmholt in 1850, which latter device only admits of looking at the background of the eye. Owing to its peculiar construction, it has been impossible heretofore to photograph the interior or back of the eye. It is a matter of great difficulty to illuminate the interior sufficiently to take a serviceable picture, and even if strong sources of light were used the exposure would last too long, rendering necessary a fixation of the eye, which, in turn would entail serious inconvenience to the patient.

"Dr. Thorner first succeeded in obtaining photographs of the eyes of cats, but the interior of the human eye being much darker it required many improvements before good photographs of the interior of human eyes could be taken. The changes proved perfectly satisfactory. With a soft light the eye is first so focused that its back yields a clear image on the photographic plate. The plate put in, ,the camera itself is opened by pressure on a special lever, and a flashlight composition is ignited by means of an electric spark generated in a storage battery. Thereby the background of the eye is lighted up for a moment sufficiently to produce a good image on the plate.

"It is possible to distinguish healthy eyes readily from the sick ones, the eye of a strongly shortsighted person being, for instance, characterized by a peculiar ring around the sun-like illuminated center. Oculists will now be enabled to watch the progress of eye diseases or disorders step by step. The apparatus also permits of taking a picture of any separate part of the interior of the eye."—[H. V. W.]—*Exchange.*

RELATION BETWEEN DISEASES OF THE AUDITORY APPARATUS AND THOSE OF THE EYE.

Blanco, T., Valencia (*Archives de Oftalmologia*, November, 1905).

T. BLANCO, M. D.

Blanco refers to many reported cases of ocular involvement dependent on diseases of the ear and mentions the various explanations of the pathogenesis as given by different authorities. According to the author, these various ocular phenomena are dependent on the intimate connection existing between the trigeminus, facial and the nerves controlling the ocular muscles; in this manner are explained the occasional appearance of reflex affections of both the extrinsic and intrinsic ocular muscles following pain in the auditory apparatus. The paper is very exhaustive and well worthy of perusal in the original. In an appendix is given a résumé of eleven cases from the literature, together with two personal observations.—*Exchange.*

EYE DISEASES FROM AUTOINTOXICATION.

Elschnig, Wien (*Klin. Mon. fuer Aug..*, 1905, ii, p. 417).

By way of excluding other morbid causes, and, most important, by the therapeutic results, autointoxication must be assumed as the cause of many and grave eye diseases. Elschnig studied these conditions within the last 10 years on his private patients and reports aphoristically on his observations, after giving a synopsis over the various forms of autointoxication, as intestinal or histogenous autoxicosis, e. g., diabetes, gout, uremia, carcinoma, chlorosis, gravidity, puerperal state, lactation, etc., or insufficient physiologic

excretion of toxins from diseases of certain organs (thyroid gland, adrenal capsules, liver, hypophysis). The most important symptom of gastrointestinal intoxication is the presence of abnormal organic substances in the urine, e. g., indican. Chiefly the nervous apparatus of the eye, the corneosclera and uvea react to the influence of gastrointestinal autointoxication. Thus in paralysis of the interior or exterior ocular muscles ,optic neuritis may occur, with symptoms similar to those in ptomain intoxications (botalism, intoxications by cheese, etc.), or functional disturbances, as neuralgia, scintillating scotoma. In none of the cases of typical relapsing retinitis, iridocyclitis and iritis, excepting a case of gonorrhoic iritis. Elschnig could find another etiology, and his diagnosis was corroborated by the treatment Eight cases of recurrent iritis are given in detail. Elschnig considers a connection of relapsing hordeola with gastrointestinal disturbances beyond doubt. An appropriate diet and disinfection of the intestinal canal with carbonate of guaiacol proved very effctual in these cases. The literature is extensively utilized.—[C. Z.]—*Exchange.*

BOOK REVIEWS.

The Medical Diseases of Infancy and Childhood, with Points on the Anatomy, Physiology, and Hygiene Peculiar to the Developing period, by Alfred Cleveland Cotton, A. M., M. D., Professor of Pediatrics Rush Medical College, Chicago; Attending Physician for Diseases of Children Presbyterian Hospital, etc., etc. J. B. Lippincott Co., Philadelphia and London.

In this work Dr. Cotton has given us a valuable addition to the text-book literature on the diseases of children. An especially good feature is a careful description of the anatomy and physiology of the new-born, with which the book opens. Special attention is, of course, paid to the most important matter of infant feeding, and the directions for modifying milk are full and excellent. An appendix treats of the hygiene of the sick room, massage, hydrotherapy, the internal use of water, etc., and admirable suggestions are given in the section on Dietary and one devoted to useful formularies. The work contains 648 pages and is unusually well illustrated.

Diseases of the Nervous System Resulting from Accident and Injury.—By Pearce Bailey, A. M., M. D., Clinical Lecturer in Neurology, Columbia University, New York City; Consulting Neurologist to the Roosevelt, St. Luke's and Manhattan State Hospitals, etc.

A new and revised edition of the popular work on Accident and Injury and Their Relations to Diseases of the Nervous System, by Pearce Bailey, A. M., M. D., of New York, has just been published by D. Appleton & Co.

The first edition of this work was printed in 1898. The present revision required a recasting of the entire book, therefore the present volume is printed from new plates. It is a thorough revision in every sense of the word, in fact, a new book, and the title given this revision, namely, Diseases of the Nervous System Resulting from Accident and Injury, is believed to be a more correct one than the one used when the book was first published.

A number of new illustrations have been added and many old ones have been displaced by new.

Dr. Bailey is an authority upon the subject covered in his book, especially upon medicolegal questions.

The author says in his preface, "Those subjects most fully described in text-books on surgery are dismissed with briefest mention. The late effects of brain injuries, for example, receive more notice than the acute symptoms." For this reason the book is of the greatest interest, not only to the surgeon and neurologist but to the general practitioner.

This is a very complete work upon a most important subject, especially to those physicians who are associated in a surgical line with the large corporations, as it treats in a practical manner, of the conditions affecting the nervous system which arises from injuries.

The author has systematized the examination of these cases, and furnishes various headlines under which the surgeon can group matters of importance connected with the injuries, and compile a permanent record, that may be kept on file for subsequent reference.

It is a most valuable contribution to medical literature, and ought to be included in every physician's library, and positively should be in the hands of every railroad surgeon.

The work starts out with a general consideration of the case. In this is included the previous history of the patient, history

of the accident, physical evidence of predisposition to nervous disease and an examination of the special senses and reflexes. It then describes the organic effects of injuries to the nervous system; commencing with acute injuries of the brain, and describing this effect upon the various organs and tissues; terminating with a careful consideration of that most important subject to all corporations, malingering, to which an entire chapter is devoted.

A Compend of Obstetrics especially adapted to the use of Medical Students and Physicians.—By Henry G. Landis, M. D., late Professor of Obstetrics and Diseases of Women in Starling Medical College.

Revised and edited by William H. Wells, M. D., Demonstrator of Clinical Obstetrics in the Jefferson Medical College, Philadelphia; Gynecologist to the Mount Sinai Hospital, Philadelphia; late Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Fellow of the College of Physicians, and of the Gynecological Section of the same; Member of the Pediatric Society of Philadelphia, etc., etc.

Eighth edition. Illustrated.

This little work, including the appendix, consists of two hundred and twenty-one pages, in which are a series of questions with well-defined answers. It seems to be intended as a guide to students to familiarize themselves with this branch of medicine.

The work is illustrated with cuts upon various subjects, and has nicely depicted demonstrations of the application of Forceps and the performance of Podalic Version.

Price $1.00. P. Blakiston's Son & Co., publishers.

MISCELLANY.

PASSENGER CARS ALMOST FREE OF BACILLI, SAYS RAILROAD CHEMIST.

In a paper read before the American Public Health Association in Boston, Dr. Charles B. Dudley, chemist of the Pennsylvania Railroad, declares that the danger of contracting tuberculosis in either sleeping or day cars has been greatly exaggerated. The upholstery of cars has often been denounced as a promoter of the spread of tuberculosis, it being claimed that the germs find lodgment therein, and eventually are set floating in the air in the form of dust.

Dr. Dudley claims that as a general rule "prolonged exposure" is necessary to infection. The sputum is difficult to dry, and when dry, difficult to pulverize, and even if dry and pulverized is so heavy that it falls to the ground. Continuing, Dr. Dudley refers to the sterilizing qualities of sunlight. He shows from the census that railroad employees suffer far less from consumption than the average of the community. The records of the Pennsylvania Relief Fund show that freight conductors and brakemen are more subject to tuberculosis than are passenger conductors and brakemen.

Dr. J. J. Kinyoun, in the New York *Medical News,* writing of the bacterial content of the passenger car, said that in fourteen examinations of dust from the carpets of cars, many of which were known to have carried tuberculous people, none showed the presence of tubercle bacilli. Out of 64 examinations of dust collected by swabs from the interior surfaces of cars only one might have been bacillus tuberculosis, and this was doubtful; out of 96 examinations of air from similar cars, only one, and out of twenty drinking cups, none.

To inform himself as to the relative danger of textile fabrics and smooth surfaces, Dr. Dudley made experiments with pieces of plush, carpet and glass, putting equal quantities of salted paste on the different specimens, allowing them to dry and then passing over them a heavy iron roller to simulate the conditions of grinding up tuberculosis sputum under the foot. After driving away as much a psossible of the pulverized material by compressed air, he found that on the glass about one-third of the material remained, while on the plush and carpet seven-eighths of it stayed behind, indicating that the danger of infection from upholstery fabrics is much less than from naked surfaces.

As the result of a protest made by a committee of the General Managers' Association of Texas Railroads, the Texas State Board of Health has agreed to modify its

rules governing the disinfection of passenger cars. The rule requiring one cuspidor in a car for each seat or every two chairs will be modified so that the cuspidors shall be used only when demanded by a passenger. A supply of them will be carried in each car, and they will be furnished to passengers on request. The rule requiring the use of a disinfecting solution in cuspidors has been abolished, but the cuspidors *must* be kept clean. The railroads have agreed to pay the expenses of sanitary inspectors to see that passenger cars are kept clean.—*Journal of The Outdoor Life.*

THE FLY AND THE TUBERCLE BACILLUS.

The recent stress which has been laid on alimentary infection in tuberculosis should lead to a more careful consideration of the means by which tubercle bacilli may reach the alimentary canal. The recent studies of Lord show that the ubiquitous fly may play an important part in alimentary transmission. The bacilli not only pass the alimentary canal of the fly unchanged, but undergo a marked proliferation there. Fly specks may contain as many as 5,000 bacilli, and, according to Lord's computations, thirty infected flies may deposit within three days from 6,000,000 to 10,000,000 tubercle bacilli. The danger does not seem to be from the liberation of tubercle bacilli in the air, but from the deposition of the fly specks on food. That this can and does occur under certain circumstances was abundantly demonstrated by our experience with typhoid fever during the Spanish-American war. We should bear in mind the possibility of infection by the fly and be much more strict than we are at present in the disposition of sputum and in the protection of food stuffs, and this refers particularly to the summer months.—*Jour. A. M. A.*

AGREEMENT REGARDING INSURANCE EXAMINATIONS.

The following agreement has been signed by all the physicians in Burleigh and Kidder counties and copies sent, for signatures, to the physicians in the other counties in the Sixth Judicial District:

"The undersigned physicians, registered and practicing in the Sixth Councilor District, North Dakota, believing that the duties of Insurance Medical Examiners require a high degree of professional skill, absolute integrity and special attention to the interests of the Insurance Companies, do hereby pledge themselves to exercise skill and care in all examinations and to make no discrimination in examinations or fees to different companies. They further agree to be governed by the following schedule of fees:

"Five dollars for each ordinary examination, including urinalysis.

"Ten dollars for each examination where microscopic examination of urine, sputum or other secretion is required.

"Three dollars for each certificate of health for renewal of lapsed policy."—*The Councilor's Bulletin.*

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R. Y. McLeod.....Bishopville.
J. E. McLure.....Bishopville.
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(LEXINGTON COUNTY MEDICAL SOCIETY.)

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(MARION COUNTY MEDICAL SOCIETY.)

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A. M. Brailsford.....Mullins.
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E. M. Dibble.....Marion.
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(MARLBORO COUNTY MEDICAL SOCIETY.)

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J. C. Moore.....McColl.
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J. L. Napier.....Blenheim.
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J. H. Reese.....Tatum.
A. S. Townsend.....Bennettsville.
J. A. Woodley.....Tatum.

NEWBERRY.

(NEWBERRY COUNTY MEDICAL SOCIETY.)

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J. J. Dominick.....Prosperity.
W. A. Dunn.....Newberry.
P. G. Ellisor.....Newberry.
O. B Evans.....Kinards.
J. K. Gilder.....Newberry.
W. G. Houseal.....Newberry.
G. Y. Hunter.....Prosperity.
J. M. Kibler.....Newberry.
W. E. Lake.....Newberry.
O. B. Mayer.....Newberry.
W. E. Pelham, Jr.,.....Newberry.
W. D. Senn.....Newberry.
J. S. Wheeler.....Prosperity.
C. T. Wyche.....Prosperity.

OCONEE.

(OCONEE COUNTY MEDICAL SOCIETY.)

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E. C. Doyle.....Seneca.
W. R. Doyle.....Seneca.
E. A. Hines.....Seneca.
J. H. Moore.....Walhalla.
A. M. Redfern.....Clemson.
—— Rosser .....Westminster.
B. F. Sloan.....Walhalla.
D. L. Smith.....Newry.
J. H. Stribling.....Seneca.
C. M. Walker.....Westminster.
J. M. Wickliffe.....West Union.

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(PICKENS COUNTY MEDICAL SOCIETY.)

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L. G. Clayton.....Central.
R. J. Gilliland.....Easley.
R. Kirksey.....Pickens.
W. M. Long.....Liberty.
L. O. Mauldin.....Pickens.
L. F. Robinson.....Dacusville.
J. O. Rosamond.....Easley.
H. E. Russell.....Easley.
W. A. Sheldon.....Pickens.
W. A. Tripp.....Easley.
E. B. Webb.....Liberty.
C. N. Wyatt.....Easley

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(COLUMBIA MEDICAL SOCIETY.)

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Sarah C. Allan.....Columbia.
J. W. Babcock.....Columbia.
A. E. Boozer.....Columbia.
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W. A. Boyd.....Columbia.
J. H. Burkhalter.....Columbia.
G. H. Bunch.....Columbia.
Hubert Clator .....Hopkins.
S. M. Deal.....Columbia.
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S. B. Fishburne.....Columbia.
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J. L. Thompson .....Columbia.
E. J. Wannamaker.....Columbia.
J. J. Watson.....Columbia.
William Weston .....Columbia.
E. M. Whaley.....Columbia.
C. F. Williams.....Columbia.

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(SALUDA COUNTY MEDICAL SOCIETY.)

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D. B. Frontis.....Ridge Spring.
J. J. Kirksey.....Saluda.
S. M. Pitts.....Big Creek.
L. J. Smith.....Ridge Spring.
W. B. Smith.....Wards.
G. L. Trotter.....Wards.
J. D. Waters.....Coleman.
O. P. Wise.....Saluda

SPARTANBURG.

(SPARTANBURG COUNTY MEDICAL SOCIETY.)

Secretary, O. W. Leonard, Spartanburg.

A. M. Allen.....Sp'bg, R.F.D. No. 4.
J. H. Allen.....Spartanburg.
J. W. Allen.....Enoree.
H. R. Black.....Spartanburg.
L. J. Blake.....Spartanburg.
J. R. Brown.....Spartanburg.
G. A. Bunch.....Spartanburg.
W. J. Chapman.....Inman.
[R. F. D. No. 2.
W. P. Coan.....Spartanburg.
[R. F. D. No. 5.
A. D. Cudd.....Spartanburg.

Geo. R. Dean.....Spartanburg.
R. M. Dorsey.....Spartanburg.
J. P. Dupree.....Clifton.
J. Ed. Edwards.....Spartanburg.
A. R. Fike.....Spartanburg.
C. W. Gentry.....Enoree.
T. D. Hairston.....Clifton.
J. R. Gibson.....Inman,
R. G. Hamilton.....Converse.
Geo. W. Heinitsch.....Spartanburg.
J. L. Jefferies.....Spartanburg.
W. H. Kelly.....Walnut Grove
W. L. Kirkpatrick.....Pacolet.
S. T. D. Lancaster.....Pauline.
J. M. Lanham.....Woodruff, R.F.D.
O. W. Leonard.....Spartanburg.
J. J. Lindsay.....Spartanburg.
D. R. Norman.....Fair Forest
H. E. McDowell.....Spartanburg.
Geo. E. Means.....Welford.
J. D. Orr.....Spartanburg.
S. D. Parsons.....Woodruff. R.F.D.
W. B. Patton.....Cross Anchor.
E. O. Posey.....Woodruff, R.F.D.
F. L. Potts.....Spartanburg.
Chas. E. Rogers.....Duncans.
W. G. Sexton.....Spartanburg.
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W. A. Smith.....Glendale.
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George Thompson.....Inman, R. F. D.
John O. Vernon.....Welford.
Lee J. Wall.....Spartanburg,
S. A. Wideman.....Woodruff, R.F.D.
J. F. Williams.....Roebuck.
H. H. Workman.....Woodruff.
G. DeFoix Wilson.....Spartanburg.

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(SUMTER COUNTY MEDICAL SOCIETY.)

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E. M. Carson.....Sumter.
J. J. Bossard.....Sumter.
Walter Cheyne .....Sumter.
Archie China .....Sumter.
F. M. Dwight.....Wedgefield.
R. B. Furman.....Sumter, R.F.D. No. 1.
J. A. Mood.....Sumter.
C. P. Osteen.....Sumter.
M. L. Parler.....Wedgefield.
P. M. Salley.....Pinewood.
J. C. Spann.....Sumter.
H. M. Stuckey.....Sumter.

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(UNION COUNTY MEDICAL SOCIETY.)

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R. R. Berry.....Buffalo.
J. C. Brawley.....Lockhart.
E. M. Carson.....Sumter.
M. W. Chambers.....Jonesville.
M. W. Culp .....Union.
W. J. Douglass.....Jonesville.
J. G. Goings.....Union.
H. T. Hames.....Jonesville.
J. H. Hamilton.....Union.
O. L. P. Jackson.....Union.
J. T. Jeter.....Santuc.
J. M. Lawson.....Union.
Theo. Maddox .....Union.
D. H. Montgomery.....Union.
S. G. Sarratt.....Union.
W. O. Southard.....Jonesville.
C. Torrence .....Union.
L. J. Wood.....Kelton.

WILLIAMSBURG.

(WILLIAMSBURG COUNTY MEDICAL SOCIETY.)

Secretary, L. B. Salters, Lake City.

T. P. Hinnant.....Lake City.
S. W. B. Courtenay.....Lake City.
L. B. Salters.....Lake City.
J. D. Whitehead.....Lake City.

YORK.

(YORK COUNTY MEDICAL SOCIETY.)

Secretary, J. R. Miller, Rock Hill.

Jno. I. Barron.....Yorkville.
I. A. Bigger.....Clover.
R. A. Bratton.....Yorkville.
J. J. Campbell.....Clover.
J. W. Campbell.....Clover.
L. L. Campbell.....Clover.
T. R. Carothers.....Rock Hill.
T. A. Crawford.....Rock Hill.
T. N. Dulin.....Clover.
W. W. Fennell.....Rock Hill.
W. A. Hood.....Hickory Grove.
T. B. Hough.....Tirza.
W. M. Love.....McConnellsville.
J. E. Massey.....Rock Hill.
J. E. Massey, Jr.....Rock Hill.
J. D. McDowell.....Yorkville.
B. N. Miller.....Smyrna.
J. R. Miller.....Rock Hill.
E. W. Pressley.....Clover.
J. H. Saye.....Sharon.
W. G. Stevens.....Rock Hill.
M. J. Walker.....Yorkville.
T. S. R. Ward.....Hickory Grove.
W. G. White.....Yorkville.

HONORARY FELLOWS.

1870.....F. L. Parker.....Charleston.
1871.....T. G. Simons.....Charleston.
1872.....J. C. Spann.....Catchall.
1873.....A. A. Moore.....Camden.
1873.....M. G. Salley.....Pinewood.
1873.....R. L. Brodie.....Charleston.
1874.....W. H. Nardin.....Anderson.
1874.....J. F. Pearce.....Claussens.
1874.....O. B. Mayer.....Newberry.
1875.....T. G. Croft.....Aiken.
1875.....Manning Simons ....Charleston.

HONORARY MEMBERS.

Prof. S. Baruch.....New York City.
Prof. Samuel Logan.....New Orleans, La.
Dr. D. M. Prince.....Laurenburg, N. C.
Dr. Joseph Price.....Philadelphia, Pa.
Dr. H. O. Marcy.....Boston, Mass.
Dr. Howard Kelly.....Baltimore, Md.
Dr. C. U. Shepard.....Summerville, S. C.
Dr. H. A. Hare.....Philadelphia, Pa.
Dr. Wharton Sinkler.....Philadelphia, Pa.
Dr. William T. English.....Pittsburg, Pa.
Dr. L. S. McMurtry.....Louisville, Ky.
Dr. George Ben Johnston.....Richmond, Va.
Dr. James P. Tuttle.....New York, N. Y.
Prof. J. H. Musser.....Philadelphia, Pa.

The following Counties have not yet affiliated:

Bamberg.
Beaufort.
Berkeley.
Chesterfield.
Darlington.
Edgefield.
Lancaster.
Orangeburg.

Medical College, State of South Carolina,

CHARLESTON, SO. CA.

Departments of Medicine and Pharmacy.

FOUR YEAR GRADED COURSE IN MEDICINE.
TWO YEAR GRADED COURSE IN PHARMACY.

THE SEVENTY-SEVENTH COURSE OF LECTURES WILL COMMENCE OCT. 1st, 1905, AND END ON APRIL 11th, 1906.

CHEMICAL, BIOLOGICAL AND PHARMACY LABORATORIES, THOROUGHLY EQUIPPED WITH ALL MODERN REQUIREMENTS.

CLINICAL INSTRUCTION GREATLY IMPROVED IN THE NEW AND ELEGANT ROPER HOSPITAL NOW BEING COMPLETED, AND OF WHICH THE FACULTY HAVE CHARGE DURING THE SESSIONS OF THE COLLEGE.

For further information, apply to

Dr. F. L. PARKER, Dean,
Hasell Street,
CHARLESTON, S. C.

An election will be held in Charleston, S. C., by the Board of Trustees and Faculty of the Medical College of the State of South Carolina on June 15, 1906, to fill the Chair of Anatomy.

All applications must be sent in to Joseph R. Robertson, Secretary of the Board.

JOSEPH R. ROBERTSON,
Secretary of Board

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South Carolina Medical Association.

Next Annual Meeting at Bennettsville, S. C., April 17th, 1907.

OFFICERS.

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T. P. Whaley, M. D., Charleston

First Vice-President.

W. P. Timmerman, M. D., Edgefield

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Henry Horlbeck, M. D., Columbia.

Third Vice-President.

M. G. Salley, M. D. Orangeburg

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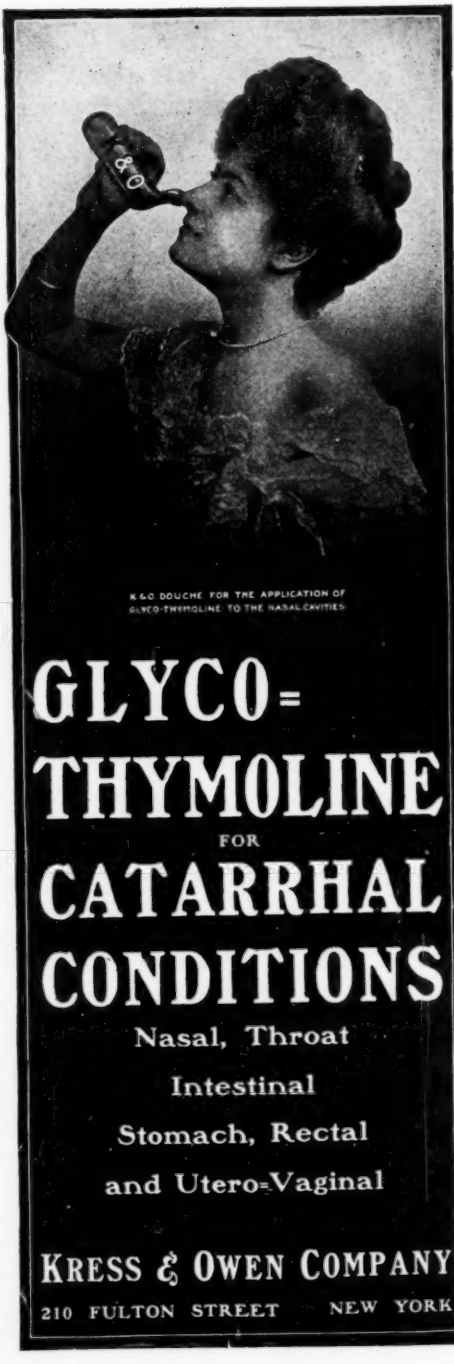
Walter Cheyne, M. D. Sumter.

Treasurer.

C. P. Aimar, M. D. Charleston.